Oil, Paint and Drug Reporter

VOL. LII. No. 5. NEW YORK, MONDAY, AUGUST 2, 1897. FOR RATES SEE PAGE 5.

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CO-OPERATIVE MANUFACTURING BY RETAIL DRUGGISTS.

One of the most interesting features of the recent convention of New York State Pharmacists at Manhattan Beach was the exhibit made by the Empire State Drug Co., a co-operative manufacturing concern, organized by retailers in the western part of the State during the past twelve months. The movement for the formation of this company was coincident with a similar effort in several other States, and was duly chronicled in the Reporter at the time. Meanwhile the progress made by the company has never been authentically stated, and but little definite information has been imparted to the public concerning it. The exhibit of its products at the Manhattan Beach meeting was, therefore, a surprise to many persons who were not aware of the variety or character of the products which the company was putting upon the market. When the company was projected, and for some time after its formation, we believe, its avowed purpose was to make only proprietary articles which the retailers who were stockholders would be able to obtain at more advantageous prices than similar preparations could be furnished for by the manfacturers of "non-secrets." But, as the Reporter foreshadowed in writing upon this subject a year ago, this limitation of its line was of brief duration, and the company speedily branched out into the manufacture of pharmaceuticals, becoming more the competitor of the pharmaceutical manufacturers proper than of either the non-secret houses, or the proprietors. Its price list at present includes full lines of fluid extracts, elixirs, syrups and with only a limited number of proprietary articles of the best selling class. It announces an early extension of its line, which will, presumably, be made to include tablets and possibly pills, the former especially requiring, according to popularly accepted theories, a very trifling investment and no special skill. As to the quality of the company's goods we have no means of knowing, but it is a fair assumption that they are of pharmacopoeial standards and that as pharmaceutical preparations they are everything that could be desired. The dress of its goods is certainly admirable, and while no specially original departures have been attempted, the line is as attractive in appearance as any that has been put upon the market.

The methods upon which the business is conducted are not clearly stated to the public, beyond the fact that any retail druggist may become a stockholder, and that sales are restricted to retailers, and to such of them only as are owners of stock. It does not appear that the amount of a retailer's holdings need bear any relation to his purchases. In other words, a large buyer may hold but a single share of stock, and a heavy stockholder may be but a small customer for the company's goods. For that reason the company would seem to be under the necessity of paying fairly good dividends upon its stock, as well as making its discounts so liberal that the profits to the retailers in handling its goods will be enough greater than upon those of regular manufacturers, to make it worth their while to help introduce and push this new line of pharmaceutical preparations. That the company reckons upon being able to pay fair dividends is shown by the fact that it determined, some months ago, to offer a portion—nearly one-half, we believe—of its stock to persons outside of the retail trade, as an investment. To what extent it has been successful in placing this stock we are not advised, but the result of a canvass of retailers at the recent meeting of pharmacists is said to have resulted in largely increasing its list of stockholders among this class, which presumably means also an extension of its list of customers. Statements made by persons connected with the company are to the effect that it has between 400 and 500 customers on its books, and that the stockholders hold from three to ten shares of stock, at $10 per share. The projectors of the company, we believe, did not count upon the necessity for employing salesmen, the theory of co-operation being that those to whose direct personal interests any co-operative movement appeals should need no importuning to purchase the products. Experience showed, however, that the continued and persistent work done by the older manufacturing houses would render it necessary for the new company to be represented before its stockholders to insure their maintaining an interest in its goods, and a traveler was therefore employed, and the field widened by a resolution to seek trade in other States. The result of this has been that the company has sought subscribers and customers—the latter necessarily implying the former under its rules—in the sections of Western Pennsylvania and Ohio contiguous to New York State.

The company now seems to us to be, to all intents and purposes, in no different position from any individual venture of similar magnitude, except that its customers have a twofold interest in pushing its products. To whatever extent this can be shown to overbalance what the pharmaceutical manufacturers can show to the retailer who remains a middleman, and devotes himself to the interests of those who have already established outlets for their goods, and are persistently maintaining the same, it should redound to the advantage of the co-operative movement. Its prices are the same as those of most of the pharmaceutical manufacturers, and its advantage to customers must, therefore, lie in its discounts. These are claimed to be the same to all customers, regardless of the amount of their individual purchases, the large buyer being permitted no advantage over the small one. If it be shown that the company's discounts are so much more liberal than those of other manufacturers, as to pay the pharmacist for the work of creating a demand from physicians, there is reason for his interesting himself in the movement. But the intelligent retailer will certainly weigh the work he has to do against the excess of the discount over that allowed by those manufacturers who do that work for him. The Reporter admits to being skeptical concerning the eventual success of all these schemes. It is a pleasant and seemingly reasonable theory that a distributor, whether jobber or retailer, may make all of his own profit and that of the manufacturer as well, by adding a manufacturing department to his distributing business. But experience in other lines as well as in drugs tends to disprove this theory, and for that reason we have not felt at all sanguine of the success of the recent co-operative efforts among pharmacists. That they are perfectly legitimate is beyond question, and we have no arguments to offer against them, if it be found, upon experience, that they can succeed in a fair business competition with the established concerns with which they have entered the arena as competitors.

THE POSITION OF COTTONSEED OIL.

The rise in the prices of cottonseed oil during the past two weeks places that commodity considerably above the level of this period last year, and indicates that the crop year will close at the highest figures that have prevailed since the opening. That the price should have remained at so low a level as has prevailed during the year disappointed the expectations which were warranted by the conditions prevailing at the opening. But the hopes entertained at that time of improvement in general business conditions have not been realized, and it is to this that the continued depression in cotton oil must be chiefly attributed. The supply, under normal conditions of consumption, would have proven insufficient for the demand, and the season will close with a smaller stock carried over than for many years past. Few crushers will get any benefit from this rise, but it will probably result in the usual scurrying for seed at an early date, for the purpose of getting new oil on to the market while the demand exceeds the supply. The consequent effect upon the price of seed is likely to be unfavorable, unless the local organizations have the situation sufficiently well in hand to restrain competition for seed from leading up to excessive prices. In the sections where seed is used as a fertilizer, the crusher is forced to compete, to some extent, with that outlet, and cannot dictate a price predicated solely upon the value of his own products. Some sections are practically independent of this consideration, and are, therefore, in a safer position to meet whatever conditions may prevail during the coming year, if they choose to take advantage of their situation. It is clear, from the position of other greases, that seed must be bought as closely as last year, to give any promise of a profitable season in 1897-8. Lard has a more promising outlook than it had a year ago, only so far as the price of options is an indicator. The stock is tremendous, and, with a very large corn crop, there is no reason to anticipate such reduction in the run of hogs as would bring stocks down to more reasonable proportions. Tallow is in a better position, and there are indications of a diminished supply of the beef product and a higher cost on the foot. Corn oil, which is becoming a more important factor, is increasing in volume, but is in the hands of manufacturers, who can hold the price up to the full value of competing products, and are to-day selling above the level of summer yellow cottonseed oil. These conditions all look reasonably favorable, except for lard, but none indicates the likelihood of prices much above the average of the past year, unless the conditions which make home consumption should materially improve.

It will be gratifying to the holders of the small remaining stocks of cotton oil to be able to close them out at better prices, and it is a vindication of all that was claimed by the Reporter and others, who took the same view, as to the deficiency of the crop, when compared with the average consumption. At the same time it will be unfortunate if the advance in price is attributed by crushers to anything more than temporary conditions, and is made the basis for buying seed, in the belief that it marks a permanent appreciation of values. The future of prices on all greases was never more uncertain than it is to-day.

ROSIN INSPECTION.

Complaint has occasionally been heard of the classification of rosin by some of the inspectors in the primary markets, but they have not been frequent, and the variations have been attributed to errors, which, though annoying, were not serious, and no formal complaints have been made. Recently, however, erroneous classifications at Savannah are alleged to have been more frequent and of a character which could no longer be overlooked. The result has been that the S. P. Shotter Company of that city has entered complaint with the City Council against the inspector, charging him with incompetency. After hearing considerable testimony the Council acquitted the inspector, but the Savannah Board of Trade has taken up the matter and has been taking testimony, and will probably make its conclusions public this week.

False packing of rosin is of comparatively rare occurrence, and variations in grading, when discovered here, have been attributed to error, which is believed to be liable to occur, as perfection in grading and classification is believed to be well nigh impossible. The trade here is looking forward with interest to the report of the Savannah Board of Trade, and is disposed to accept its conclusions as a settlement of the charges, though it is thought that good will probably result from the complaint made by Shotter & Co. The rule which is claimed to have been practically ignored by the inspector is as follows:

Inspectors shall sample at the bottom, head or side of the barrel at least five per cent. of every mark of rosin grading K or better quality, and, should false packing be discovered, he must examine the entire lot for false packing, the expenses of said examination to be paid by the seller. Every mixed packed barrel shall be marked with both the highest and lowest grades, both marks shall be given in the certificate of inspection, and samples of both grades shall be exhibited in the pans offered for sale. It shall be sold on its merits and without reference to either grade, but if there is no special agreement settlement shall be made at the price of the lowest grade.

THE DISCRIMINATION AGAINST CYANIDE OF POTASH.

A daily paper, evidently of great brilliancy and doubtless of much power, though little known east of the immediate vicinity of Denver, Col., in which city it is published, is much elated over its success in securing a reduction of the duty on cyanide of potash. Just what force besides Senator Jones of Nevada and his little miner's hatchet was at work in favor of this reduction few people outside of the Senate knew, but that it was an effective force was apparent from the results. But now comes our Denver contemporary and confesses to the fact that it did it, and throws bouquets at itself in a way which certainly should win the plaudits of the grizzled miners of the Rocky Mountains, and increase its subscription list to an extent that would make it an unsurpassed medium for the advertisement of that class of proprietary articles which is chiefly indicated in the diseases incident to the unconventional social customs of the mining towns. This is its own account of what it did and how it did it:

Four weeks ago it took up the matter of the proposed increase in the duty upon cyanide ore; explained how disastrously it would affect the mining of low-grade gold ore, in this and other States, by increasing the cost of treatment; enlisted the active interest of the millmen of the country; showed how the scheme was being engineered through the Senate by a powerful lobby working in the interest of the German trust; called the attention of the Western Senators to the importance of defeating the proposed increase, and induced the International Gold Convention to take up the matter and wire a strong protest to Washington. And the result of its efforts in the various directions mentioned has been not only to defeat the proposed increase in the duty, but to secure a substantial reduction in the rate provided in the Mills bill. The Times will rest on the seventh day, but it will take up its cudgel again on Monday, and stay with the proposition to the end, with the confident hope of be-

ing able to have the commodity wholly relieved of tariff restriction and placed on the free list.

We know of no "German Trust" which was interested in maintaining duties, but believe that an American company with works at Perth Amboy, N. J., did exercise itself to that end.. But our Western friend and its constituents should pause in the celebration of their victory to reflect upon the announcement just cabled that foreign makers of cyanide have advanced their prices to an amount equal to the saving in the duty. If this be maintained, the discomfiture of the "German Trust" at Perth Amboy, N. J., will not be wholly to the profit of the miner, but rather to the advantage of the thrifty foreign maker. Had the reduction of the duty on cyanide been consistent with other features of the tariff bill, it would have been open to no criticism except such as might be ventured against the policy involved, but as the article, like quinine, has been singled out and arbitrarily discriminated against for political purposes, it will be rather interesting to watch the foreigner take the benefit and the miner continue to "pay the freight."

But our contemporary is not content with reducing the duty, or even making cyanide free. It now proposes that the mining States shall produce their own cyanide, and thus at one fell swoop become alike independent of the "German Trust," and any other maker in any other of the effete Eastern States. How easily this might be done it shows in the following sentences:

But the discussion of the subject has provoked considerable inquiry as to why a great and growing industry in this country should longer depend for supplies upon works established in Germany and in Scotland, when all of the elements entering into its composition are as common to every section of the United States as are sand and gravel. The base of cyanide of potassium, yellow prussiate, is made of the blood, entrails, hoofs and horns of cattle, and to this base is added common, ordinary potash, which can be produced anywhere by the simple process of leaching the ashes of plants. These are the essential elements of cyanide of potassium and include them all. * * * * * There is no secret or mystery connected with its manufacture, and no patent upon the process. Any city of considerable size in the country can procure almost unlimited quantities of the elemnts from the local slaughter houses and stock yards. The potash requirement is easily and cheaply obtainable. Works of sufficient capacity to produce all the cyanide required by the mills already in operation in Colorado, Utah, New Mexico and Arizona, could readily obtain all the raw material required, and not a pound would need to be shipped in. * * * * * Without having at command the exact cost of producing the article, we yet believe that its manufacture here could be made very profitable.

Surely nothing could be simpler than this, and why should not any butcher become a maker of cyanide? Of course, a reduction of the duty might be discouraging to the establishment of this infant industry on a small scale, but with "blood and entrails" as "common as sand and gravel" thereabouts, there would seem to be no reason why Colorado shouldn't swarm with cyanide factories. It is this spirit of independence which is rapidly emancipating the erstwhile Woolly West from the domination of Eastern capital, and we are glad to push along so good a thing.

ALLEGED SCHEMES OF THE STANDARD OIL CO.

There is probably a reasonable doubt whether the Standard Oil Company can be held accountable for the sins which its enemies commit on its account. Of course, if the company had never existed it would have had no enemies, and the world would presumably have been saved the sin which those persons who are arrayed against this gigantic corporation commit in their pursuit of its scalp. If the company can, by mere virtue of its existence, be held to a vicarial and indirect responsibility for this class of offenses, whatever other misdeeds it may be guilty of, will, in comparison, be as simple misdemeanors are when compared with larceny from the person with intent to do bodily harm. The chief of these sins, we believe, certainly the most conspicuous by reason of the frequency of its repetition, is lying. There may be worse crimes than lying in the calendar, but there is none more tiresome to the victims. If by any physical and financial possibility the Standard Oil Company and all who therein are could compass half the schemes which are charged to its fertile resources, there would by this time be little left in the way of industrial, commercial or financial opportunity for the rest of the world to struggle for. According to the versatile newspaper chronicler there is scarcely a country on the globe into which the hand of the Standard has not been plunged, at one time or another, to grasp some newly discovered source of wealth, and the first announcement of such a discovery is habitually coupled with the announcement that the Standard Oil Company is either investigating it for the purpose of control, or has already collared the prize.

We presume that the persons who are represented by the term Standard Oil Company are not seriously disturbed by these reports of their sometimes valuable and sometimes worthless acquisitions, but they become monotonous reading to the rest of the world. "Barnie" Barnato and Col. North afforded some relief while they were in the heyday of their speculations, but with their passing there is nobody left at whose door every sort of scheme which a fanciful imagination may invent may be laid with perfect safety except the Standard Oil Company. For that reason, we assume, a Chicago journalist of more comprehensive imagination than many of his fellows has heralded the beginning of the grand consummation by which everything worth owning will pass into the hands of the Standard, by crediting it with being at the head of a grand industrial combination, the aggregate capitalization of which will be "in round figures $1,000,000,000." It will be observed that most of these figures are "round." They represent, moreover, the face value of the stocks of nearly all the large "trusts," multiplied as many times as served to make up the round and toothsome total. A lot of side shows that have been credited to the Standard from time to time were omitted, but, having reached an even thousand million, the author of the story generously disregarded the few millions of change that might be over. It would have been more generous to the Standard if he had omitted from his list some of the "trusts" which helped to make his thousand million, unless his knowledge of the value of their securities differs vastly from the Wall street estimate. The worst enemy of the "Standard crowd" has never failed to credit it with brains, and there is an inconsistency between such an admission and the schemes with which these people are charged, that passeth understanding. One thing is apparent, however, and that is that the Standard Oil Company finds time to attend pretty thoroughly to its own business, a condition which would scarcely be possible if it were involved in a tenth of the operations with which its name is connected by the gossipy tools of stock jobbers, who help to fill the columns of the daily press.

The State Board of Health has been asked to suppress the factories of the Sanitary Utilization Company and the Barren Island Fertilizing and Oil Works, on Barren Island, in Jamaica Bay. William J. Kelly, vice-president of the Rockaway Park Improvement Company and counsel for the Manhattan Beach Hotel and Land Company, has complained to the Board that these establishments are a menace to health, as they carry almost unendurable odors to Rockaway Beach.

There is no establishment for the manufacture of chemical products in Ecuador. In 1893, the imports amounteo to 813,021 kilograms (1,792,386 pounds), with a value of $303,389. Pharmaceutical products, perfumery, and essences came from France, Germany and England; aniline and other dyes, which are used in coloring the cloth made in the country, came from France and Germany, as well as chemical products, such as colors, cements, etc., used in the construction of buildings.

TRADE ITEMS.

[For other Trade Items see contents on page 21.]

Judgment for $280 has been recorded against Benedict J. Beck in favor of Valentine & Co.

Judgment for $287 has been entered against Charles F. Bartlett and William J. Lieli in favor of J. McKesson, Jr., et al.

For the New York Navy Yard a quantity of paints, toilet soap, etc., is required. Bids to supply the same will be opened Aug. 10.

The W. S. Merrill Chemical Company has sold the property which it formerly occupied at Sixth and Eggleston avenues, Cincinnati, for $27,000.

Messrs. F. A. Hull & Co., of Danbury, Conn., dealers in paints, etc., are offering to compromise with their creditors at 50 cents on the dollar.

Mr. E. A. Fuge of the Lyman-Eliel Drug Company, Minneapolis, was in town last week on a pleasure trip. His reports of trade prospects in the Northwest are encouraging.

The Parmalee Drug Company will remove its headquarters from Dansville to Norwich, N. Y. The business was established by the late Dr. Parmalee twenty-five years ago.

The Navy Department, Washington, solicits bids to supply the yard at Portsmouth, N. H., a quantity of window glass and other requisites. Bids will be opened Aug. 10.

Mr. F. C. Schapper, Chicago manager for the Roessler & Hasslacher Chemical Co., has been in town for a number of days, and has been a welcome guest at the Drug Club.

The American Printing Ink Company, Chicago, has been incorporated with a capital of $12,000, to make ink. etc. Incorporators: F. Irving Christopher, John D. Wild, L. L. Dent.

A commission has been issued to F. E. Taylor, Samuel Lord and H. R. Luhn as corporators of the Ashepoo Phosphate Company, of Charleston, S. C., whose capital stock will be $100,000.

Mr. P. R. Lance of William R. Warner & Co., was in town last week, and his presence offered to his friends the greatest possible relief from the gloom with which the weather enshrouded the city.

The Louisville Soap Company, Louisville, Ky., has been reorganized under an entirely new management. William A. Baker is president and J. A. Ferguson secretary and treasurer of the company.

The wholesale drug house of Hale, Justis & Co.. Cincinnati, was damaged by fire to the extent of about $5,000 on Wednesday last. The fire started in the basement and did not reach the upper floors.

Robert A. Linn, a well-known druggist of Deckertown, N. J., died at his home in that village on the 21st ult. He was a member of the firm of Linn & Lawrence, and was an active and prominent business man.

Spence & Co., manufacturing druggists of Knoxville, have made an assignment for the benefit of creditors. Cary F. Spence is named as assignee. The assets are about $12,000; liabilities, $9,000. Bad collections caused the failure.

The extensive plant of the Badger Paper Company at Kaukauna, Wis., was totally destroyed by fire last Monday. The loss is $250,000; insurance, $200,000. The mill was one of the largest in the Northwest. It was owned by Frombach & Vilas.

Stockholders of the North American and Liberty Rubber Companies, of Setauket, L. I., met in Jersey City last week and reorganized the two companies as one under the name of the Empire State Rubber Company, with a paid-up capital of $300,000.

The Kent Lubricant Company, of Missouri, has been incorporated with a capital stock of $4,500. Arthur D. Forester, Thomas H. Robinson, R. G. Robbins and John S. Robbins are the incorporators. It will deal in a lubricating compound, axle grease, etc.

Upon application of Messrs. Lutcher & Stark before the District Court at Lake Charles, La., the Stockholm Tar and Turpentine Company has been placed in the hands of a receiver, John Faxon, a former employe of the company, receiving the appointment. This company's plant is located at Stockholm, La.

The Central Ohio Chemical Company, of Newark, O., has been organized to manufacture drugs, chemicals, chemical and other extracts, on $5,000 capital. The incorporators are Frank L. Beggs, John L. Styron, Harry Swisher, John H. Swisher and Edward W. Crayton.

Among the cotton oil men who were on 'Change during the week may be mentioned Mr. W. R. Price of Houston, Tex.; Mr. H. C. Butcher, president of the Southern Cotton Oil Company, of Philadelphia, Pa.; Mr. Fred Oliver of Charlotte, S. C.; Mr. E. V. Zoller, of Tarboro, S. C.

The Mayell & Hopp Company of Cleveland has been incorporated with $20,000 capital by Lewis C. Hopp, Harry G. Mayell, Margaret J. Mayell, Francis C. McMillen and Richard M. Parmely. They will manufacture and deal at wholesale and retail in drugs and druggists' supplies.

The Sheriff has received an attachment against Maud Meyberg, transacting business as Mme. M. Yale, manufacturer of toilet preparations, who lives at Chicago, for $1,191, in favor of George J. Sicard, as assignee of Henry A. Richmond, for balance due for printing and lithographic work.

Those of our readers who may be in want of cyanide or chlorate of potash or a general line of chemicals or castor oil will find it to their interest to communicate with Messrs. Fuerst Bros of this city, who are headquarters for an extended list of goods, as indicated in their card in another column.

A number of bald-headed capitalists at Port Huron, Mich., have been so far encouraged by the owner of a hair restorer as to the possibilities of being able to sit in the front row of the orchestra without eliciting the satirical ha-ha, that they have formed a big company to market the preparation.

The Kentucky Extract Company of Columbus, O., has been incorporated with capital stock of $20,000. The incorporators are James Kilbourne, Leopold Loeb, Henry Loeb, Horace Villiers-Stuart and Felix F. Jacobs. The company wil manufacture and deal in tobacco extracts, chemicals and chemical products.

It has been decided to develop the rich vein of pyrites of iron recently discovered in Carter county, Tenn. Philadelphia and Chicago capitalists are interested. The promoter expects to be shipping 1,500 tons a day. This is claimed to be the greatest deposit of pyrites capable of being worked in the United States.

The Rockdale Oil Mill Company, at Rockdale, Texas, held its annual election last week, resulting in the election of the following directors: B. B. Baxter, F. A. Graves, C. H. Coffield, B. Lowenstein and J. L. Lockett, who in turn elected B. B. Baxter president and J. L. Lockett general manager, secretary and treasurer.

At the annual meeting of the stockholders of the Virginia-Carolina Chemical Company, held at Richmond, Va., recently, the following officers were elected: S. T. Morgan, president; S. W. Travers, first vice-president; E. B. Addison, second vice-president; F. Whittle, treasurer; S. Dabney Crenshaw, auditor, and E. Strudwick, secretary.

Organization of a company was perfected at Pine Bluff, Ark., last week for the operation of a cottonseed oil mill with the following officers: Dan W. Wright, Little Rock, president; J. W. Corcoran, vice-president; W. H. Langford, secretary; John R. Fordyce, St. Louis, treasurer and manager. Work has already been begun upon the erection of the plant.

It is announced from Milwaukee that Mr. Charles von Baumbach, founder of the Charles Baumbach Company, will retire from active business, his interest in the business having been purchased by Eugene F. Yahr and Otto Strack. The Charles Baumbach Company was organized more than twenty-five years ago, and ranks high in the business world. It deals in drugs by wholesale.

The schooner Sailor Boy arrived at Port Townsend, Wash., July 26, from Port Clarence, having made the passage in the remarkably quick time of fifteen days, and bringing back the latest news of the Behring Sea whaling fleet. Capt. Peterson reports that the following whalers are in Port Clarence with catches as follows: Orsa, three; Thrasher, two; Norwhal, one-half; Kerluck, one; Jeannette, two and a half; Alexander, three; Belvidere, one; Narvach, six; Bailing, none; Beluga, none; Wm. Balios, none. The Sailor Boy brings a cargo of whalebone valued at $30,000.

Only 1,148,488 pounds of oleomargarine were made and tax paid in the first district of Illinois during June, compared with 1,592,861 pounds in June, 1896. Evidently the Chicago oleo makers did not want to carry big stocks into July with the new State law coming into effect. Only three licenses were taken out to retail oleomargarine in Chicago during June; one year ago, four.

The business of the Swaim Panacea Company, 113 South Seventh street, Philadelphia, which for years after its formation by Dr. James Swaim was a money-making concern, was yesterday sold out by the Sheriff. The sale was to satisfy a judgment confessed by Dr. James Swaim to his daughter, Mme. Battanchon, who with her husband will now conduct the business. The amount realized was $783.

A message has been received at San Francisco announcing the loss of the whaler Cape Horn Pigeon in the Japan Sea during a storm. Capt. Scullam and the crew of eighteen men were saved. Nine hundred barrels of sperm oil went down with the vessel. Two thousand pounds of bone had been shipped home a short time before the disaster. The vessel was owned by J. & R. Wing of New Bedford, Mass.

The Eureka Chemical and Manufacturing Company of La Crosse, Wis., has begun suit in the United States Circuit Court against the Sterling Remedy Company of Chicago for $100,000 damages, alleging libelous and malicious prosecution. The Sterling company brought suit some time ago against the Eureka company for infringement, and Judge Jenkins decided in favor of the La Crosse company.

About midnight of July 23 some one attempted to burn a storehouse in Middletown, Conn., used by Thomas Dickinson, witch hazel manufacturer. It contained several hundred barrels of witch hazel, and about thirty barrels of alcohol. The incendiary had accumulated shavings and waste, and after saturating them with kerosene set them on fire. The blaze was discovered and extinguished before much damage resulted.

The joint conference of the Glass Bottle Manufacturers and the representatives of the Glass Bottle Blowers' associations of the United States and Canada, after a three-days' session at Atlantic City, N. J., decided to make a change in the wage scale because of the present business depression. Three years ago, when the Wilson bill went into effect, a 15 per cent. reduction was made in the wage scale, which has never been restored.

A big mining deal is reported to have been consummated by which Braden Bros., of Helena, Mont., have come into possession of the reduction works at Pilot Bay on Kootenay Lake, B. C., owned by the Kootenay Mining and Smelting Company. The works have been idle about a year, but will be operated at once. The plant includes a 50-ton concentrator, which will also be operated. The deal includes Blue Belle, one of the largest lead mines in the world.

The Farmers' Mining Company has made a big shipment of phosphate rock from Coosaw River to Japan. The German bark Amazone, with 1,900 tons of rock, sailed from Beaufort on Tuesday last for Yokohama, and will make the trip in about four months. Next month the Charleston Company will ship 3,300 tons of rock to the same people in Japan. The St. Mungo, a sailing vessel, will make the trip. The first shipment of Coosaw rock to Japan was made in 1888.

The main building of the Peoria Grape Sugar Company was completely destroyed by fire July 24. The loss is $500,000, the total insurance carried being $460,000, of which nearly $300,000 was on the burned building and contents. The fire broke out in the sulphur room, apparently with an explosion. The immense eight-story building was a mass of flames in five minutes, and was completely destroyed, the walls soon falling in. It contained a great deal of valuable machinery.

Herbert H. Clark, of Decatur, Ill., a leading linseed oil manufacturer, with interests at Fredonia, Kan., and a prominent thirty-second degree Mason, was married at Lansing, Mich., on the 22d ult. The bride, Miss Florence MacIntyre, daughter of Col. D. S. MacIntyre, of Knoxville, Tenn., is a handsome brunette, a graduate of Ann Arbor University and has long ranked as the leading belle of Knoxville, Tenn. The couple sailed for Europe on the 24th, to return about Oct. 1, and will reside in Decatur, Ill.

The Tampa (Fla.) Times says one of the most important factors on the west coast is the sponge industry. It has headquarters at Tarpon Springs, where large packing houses have been built, giving employment to many men. Here the fleet of 100 schooners, ranging from ten to twenty-five tons burden, rendezvous, taking on supplies and discharging cargoes of sponge, which are bought up by local sponge merchants.

The Boston Advertiser says: "A syndicate has been negotiating for the Baker Chocolate Company. Almost all of the $1,000,000 of the stock is in the hands of executors of L. L. Pierce. The property and good will are appraised at $3,000,000 and an offer of $4,500,000—to raise which $2,000,000 5 per cent. bonds and $2,500,000 in stock were to be issued—was made, and it was figured that on this valuation 9 per cent. dividends could be paid above interest and $10,000 annually set aside for sinking fund. The Pierce estate declined to sell at that price."

PETROLEUM NOTES.

One of the new oil wells near Fullerton, Nev., exploded one night recently. The flames shot up 200 feet. The damage amounted to $1,000.

The last six wells completed on Montour run were all failures, except No. 1 Tipker, which is not good for more than two barrels a day. But one well is now drilling in that locality.

Meldron & Sons have a better well on the Alexander farm, near Bridgeville, than they were at first credited with. It improved with deeper drilling, and will make a 35 or 40 barrel pumper.

Lightning struck the Missouri Pacific oil storehouse at Council Grove, Kan., and the building and entire stock were consumed, in all about 5,000 gallons of lubricating oil and signal oil making a very hot fire.

About four miles east of Salyersville, Ky., on the farm of J. P. Conley, oil broke out about a week ago, and has been flowing at the rate of twelve barrels in ten hours, and continues to flow. It is said to be first-class petroleum.

Cunningham & Co. of Lima, Ohio, have disposed of their holdings in the new Hume field, six miles southwest of Lima, to Aiken, Redway & McCormick for $35,000. Four good producing wells, with leases covering about 300 acres, go in with the deal.

As an instance of the indiscriminate use of nitro-glycerine in the Elk Fork pool, one is related of the shooting of a well that was at the time producing at the rate of 600 barrels a day. A well is going down nearby on an adjoining lease, and the owners of the producers thought to get a little of the other fellow's oil before he got his well down.

At a recent meeting of the Corsicana (Tex.) City Council the Committee on Public Buildings and Grounds, to which had been referred the proposition of the Texas Petroleum Company to lease or purchase the oil lands belonging to the city, reported that a deal had been closed with the company for the lease of the lands, the company to pay to the city one-eighth of the product of the lands for same. The company also obligates itself to complete three wells on the leased ground within twelve months.

The stroke of a hammer upon a nail caused a $40,000 fire at Olean last Tuesday and eleven men narrowly escaped from being burned to death. The men were new-roofing a 35,000-barrel oil tank, which was filled with crude oil, when it was discovered that the oil had ignited from a spark caused as above stated. A rush was made for the stairway and nine of the men made their escape by that means, the other two being obliged to seek safety by jumping into a tree and going down the trunk. An instant later the tank was a mass of flames.

Near Grayville, Greene county, the well of the Natural Gas Company of West Virginia, located on the Cooke farm, is producing at the rate of 175 barrels a day from the Ninevah 30-foot. The following shows the depth of the wells drilling in the Fonner pool: Barnsdall & Co., No. 1 T. Ross, 2,250 feet; Murphy Bros. & Co., No. 1 Lacock, 2,400 feet; South Penn Oil Company, Nos. 2 and 3 Brister, 2,250 and 2,050 feet respectively, and Fonner No. 3, 900 feet; Hartman & Co., No. 1 John Dunn, 2,200 feet, and J. M. Guffey & Co., No. 1 A. H. Dunn, 2,250 feet.

The Eastern Oil Company, one of the largest operating firms of the southwest, has sold its holdings in the Sistersville field to the Carter Oil Company. The Eastern has a total of forty-seven producing wells in this territory, nine of which are on the Frieden farm at Dog Skin and the rest are in the Millers Run territory. In addition to this it has a large amount of undeveloped territory, all of which was sold at a handsome figure. It is understood the production sold for in the neighborhood of $300 a barrel, while the entire sale is said to amount to between $50,000 and $75,000.

Elk Fork operations have increased at a rapid rate in the past four months. The first month in which it began to show any prominence was April, when there were twelve rigs up and wells drilling. In May the number of rigs and drilling wells has been increased by only three. In June the number had been increased to thirty-one, and July will show forty wells drilling and rigs up in the Elk Fork and Mayfield developments. The Mayfield or Conway development dies to the southeast of Elk Fork, and unless all signs fail the two will be connected by a continuous line of producing wells. An extension to the southeast is now assured by the size of the Boyd Bros. & Malarkey well on the D. Snyder farm. The following shows the gauges of the wells in the pool producing 100 or more barrels a day: B. F. Hawkins Nos. 2, 4 and 5, 190, 200 and 140 barrels respectively; S. A. Kellar Nos. 1 and 2, 250 and 150 barrels respectively; B. Tuttle No. 2, 180 barrels; B. F. Hawkins Nos. 3 and 4 (Foster, owner), 110 and 100 barrels respectively; B. F. Hawkins No. 1 (Henderson & Moore, owners), 180 barrels; Pipes' heirs No. 1, 900 barrels; D. Snyder No. 1, 600 barrels; Prickett No. 1, 160 barrels; Asher No. 2, 150 barrels; J. T. Hawkins Nos. 1 and 2, 170 and 160 barrels respectively; Bunfield No. 1, 180 barrels; Farrell No. 1, 150 barrels, and the Farrell Oil Company's No. 1, on a part of the same farm, 160 barrels.

OBITUARY.

Schuyler C. Wells.

Mr. S. C. Wells, proprietor of the Shiloh remedies died at his home at Le Roy, N. Y., on the 20th ulto. Mr. Wells was born at Paulbury, Vt., in 1840. He went to Le Roy in 1866 and formed a copartnership with his brother-in-law, Dr. L. S. Hooker, under the firm name of Hooker & Wells. They purchased Medical Hall and conducted an extensive drug business for three years, when the partnership was dissolved. During that time he applied himself to the study of medicine. Later he sold his interest in the drug business to enter upon other manufacturing pursuits, but again took up the former, devoting himself to the perfection of his formulae, which he soon put on the market under the name of "Shiloh's Family Remedies." This was in 1871, and in 1873 he sold his drug business to F. T. Wilcox, and devoted his entire time to the introduction of his remedies, soon becoming one of the most extensive manufacturers of proprietary medicines in the United States and Canada. He was one of the incorporators of the Le Roy Salt Company, but sold out his interests several years ago. He was for many years a prominent breeder of fine trotting horses, but latterly transformed his stock farm into a model dairy farm. He was a very energetic business man, and was prominent in local affairs.

Francis Baumer.

Mr. Francis Baumer, one of the best known manufacturers of wax candles in the country, died at his home at Syracuse on Wednesday last.

Mr. Baumer was a native of Ursensollen, Bavaria, where he was born seventy-one years ago. He came to America in 1848, and that year he went to Buffalo. Later he married in that city, and his widow and four children survive him. In December, 1848, Mr. and Mrs. Baumer went to Syracuse, where they have made their residence ever since. In 1871 Mr. Baumer engaged in the manufacture of wax candles. Close attention to business built up for him an immense trade, and made his establishment one of the most prominent of its kind in the country. He won an enviable reputation as an honorable and usehful citizen, and his manufactory has long been recognized as one of the representative and successful establishments of Syracuse.

CORRESPONDENCE.

Bogus Barbadoes Aloes.

Philadelphia, July 28, 1897.

Editor Oil, Paint and Drug Reporter.

A perusal of the lists of nearly all the wholesale drug houses show that they still quote Barbadoes aloes. It is well known, however, that no Barbadoes aloes has been brought into England or into this country for a number of years. We have received a letter from this country's representative at Barbadoes, which reads as follows: "At one period a considerable export trade was done in this colony in aloes, but eventually that product, like every other minor industry here, was compelled to give way to the sugar cane. For many years the exportation has ceased, and only in very rare instances are aloes now collected here." Would it not be well to stop this practice of selling Curacoa aloes under the name of Barbadoes, and sell them for what they really are; that is, Curacoa aloes, especially as the price of the Curacoa aloes is about one-third of the price asked for the spurious, so-called Barbadoes aloes? This practice of selling Curacoa aloes for Barbadoes aloes is of the same character as selling St. Vincent arrowroot for genuine Bermuda, and obtaining, in this way, three times the cost of the article. These practices seem to become so fixed by long habit that many of the trade do not consider them dishonest, but a little consideration shows them to be so.

H. B. FRENCH, V. P.
Smith, Kline & French Co.

MISCELLANEOUS.

Texas Cottonseed Crushers' Convention.

The secretary of the Texas Cottonseed Crushers' Association has issued the following notice to the crushers of that State for the convention, which is to open at Galveston to-day:

We have just returned from the convention of cottonseed crushers and others interested in that industry held at Nashville, Tenn., on the 16th and 17th insts. As matters of interest to our Texas crushers were considered, which will be taken up at our meeting on Aug. 2 at 10 o'clock a. m., at the Beach Hotel, Galveston, we earnestly request you to be present on that date and by your personal assistance help perfect such plans as will mutually benefit, not only the crushers of Texas, but be of incalculable value to the cottonseed crushers and all others throughout all the cotton growing States.

I am now arranging for a cheap special rate to Galveston. Call on your railroad ticket agent for it. Very truly yours,

Robert Gibson, Secretary.
H. L. Scales, President.

Projected Cotton Oil Mill at Gretna, La.

According to the New Orleans States, another cottonseed oil mill will soon be in operation at Gretna. A recent sale of property there at auction some time ago was to an agent acting, it is alleged, for Henry Marx and other capitalists, who wanted the site for that purpose. Mr. Marx has been seen in the vicinity of the property of late, which has given rise to the talk that he is at the head of the contemplated enterprise. Mr. Marx has had considerable experience in the cottonseed oil business and is looked upon as one of the most successful operators in that line in the South. Should the mill project be carried out it will be built on the present warehouse that stands on the front, and which is just suitable for the purpose. Its capacity will not be as great as that of the other mills located in Gretna.

The Ohio Liquor Tax on Jobbing Druggists.

Referring to the effort of the State's representatives in some sections of Ohio to compel jobbing druggists to pay the so-called Dow tax, which was reported in our last issue, Mr. W. J. Walding of Walding, Kinnan & Marvin recently said to a reporter for a Toledo paper: "The payment of the Dow tax is not required of wholesale druggists. We paid the tax for two years, until we were informed by the State Auditor that it was not necessary. There are only twelve wholesale druggists in the State. Some of the retail dealers in the smaller towns pay the tax."

It has also been announced from Cleveland that the county attorney for Cuyahoga County had decided to aban-

don the attempt to enforce payment of the tax, after conferring with the Attorney-General for the State.

What the Reporter is Expected to Print.

The Reporter has the warmest feelings of respect for its friends in various lines of trade, and is glad to publish news concerning them, provided always that it be good news, and also consistent with that high standard of truth to which this journal steadfastly adheres in all that it prints, even to gossiping personalities. It is, therefore, painful to us to be called upon, and to refuse, as we must, to print items of news which reach us by every mail, by messenger, and by all sorts of means, and the obvious untruthfulness of which is so apparent that it would be recognized even by a person so unfamiliar with falsehood in any guise as is Mr. E. G. Wells. By way of illustration, we may print an item which was lately left upon the desk of our Christian Endeavor editor. It was as follows: "Mr. George R. Hillier, of the R. Hillier's Sons Company, is summering at Asbury Park, and is frequently to be seen fishing in the surf. On Saturday last Mr. Hillier caught a sea bass weighing 137 pounds without its stripes."

Now, any one who knows anything about surf fishing knows that such a catch is impossible. Moreover, sea bass have no stripes. Mr. Hillier absolutely denies the truth of the report, and says, without any boasting, that the most he ever did was to catch a bluefish weighing 73 pounds. Mr. Hillier is a man who deprecates untruthfulness, and would rather have given the weight of his bluefish at 72 pounds than exaggerate an ounce. That is the kind of man we like.

Another example of the imaginative gossip is the following:

"Mr. Reginald P. Rowe, of the National Lead Company, is stopping at Long Beach this summer. He has a cottage, and regularly rides to and from business on his wheel."

Now, Mr. Rowe is an enthusiastic wheelman, and admits that he sometimes rides in from Long Beach, about thirty miles, when he is too much pressed for time to trust himself to the Long Island Railroad, or wants to be at his office before 7.30 a. m. But he thinks it absurd for any one to carry a fondness for the wheel to the extent which this item indicates. The statement is about on a par with the following:

"Mr. J. H. Stallman holds the time record in the middle-weight class for long runs on a bicycle. He has several times ridden from New York to Asbury Park, via Little Silver and Monmouth, a distance of 70 miles, in 4 hours, 43 minutes."

Mr. Stallman is certainly a good, even a great, rider; but he freely admits that the best he ever did for the distance named was 5 hours, and is very much put out that any one should attempt to make it appear that a man of his age had been scorching. In justice to Mr. Stallman we decline to print the paragraph.

Another preposterous yarn is the following, which is evidently in a disguised hand:

"Mr. S. M. Moneypenny, of S. G. McCotter & Co., may be seen any morning riding his wheel in Prospect Park and down the path toward Coney Island before 5 o'clock."

Mr. Moneypenny denies that such is the case. He says that there were times when he may have been seen riding home from the island about sunrise, but deems it an unwarranted reflection upon his habits to have it appear that he starts for the island at any such disreputable hour. The evident intent of the item, as sent to us, was to injure Mr. Moneypenny's social standing. A similarly malicious spirit seems to have incited the following:

"Mr. E. H. Hammer, who is not only an enthusiastic and influential member of the Masonic fraternity, but also a devoted wheelman, is making an effort to have the bicycle substituted for the goat in the Masonic ritual."

This item was shown to Mr. Hammer, and he denounces it as a malicious falsehood. He said that ordinary forms of torture, such as shooting the chute and the like, having ceased to interest candidates, he had suggested that riding a wheel over pig iron in a twenty-foot ring might prove entertaining to those who had not already become expert bicyclists. But he never had any idea or intention of permanently displacing the goat.

Another item, evidently intended to be humorous, is as follows:

"Mr. J. Lamb Hopkins, of J. L. Hopkins & Co., is summering at the Marine and Field Club, and divides his time equally between his yacht and his wheel."

This was evidently written by some smart Alec, who wanted to be funny at the expense of the very appropriate middle name of Mr. Hopkins. As a matter of fact, Mr. Hopkins is not summering at the club, though his yacht may frequently be found on its anchorage ground. There is no harm in the item, but it is just as well to state facts, even where you want to be funny.

And so the items go, week in and and week out. Fishing and wheeling seem about equally to appeal to the cheerful liar, and we are expected to print, and the public to believe, all that he says about the accomplishments of those who are devoted to these pastimes. But we decline to do it, we ride a wheel and go fishing ourselves.

(Contributed to the Reporter.)

Fixed Alkalies, Potash and Soda.

It is a well established chemical action of the fixed alkalies proper (potash and soda) on vegetable or other organic matter to render it more soluble and thereby cause it to move speedily and effectually reduce insoluble and inert organic matter to the state fit to be taken up by the roots of plants and enable them to be more completely consumed as food for plants. They may be said to prepare the food of plants, forming readily soluble compounds with the humic acid and the organic substances which exist in the soil. Under the influence of the alkaline carbonates (not muriates or sulphates) the organic matter disappears more rapidly than it would otherwise do, and after it has thus disappeared, fresh additions of the carbonate produce no further good effects. Putrefactive fermentation will shortly set in where a soil rich in organic matter is mixed with enough alkali in the form of a carbonate to saturate it, and is then left moist in a warm place. Conversely, it is known that acid and acid salts hinder putrefaction. The presence of the alkali favors the growth of microscopic ferments, and that of an acid hinders it. The real signigcance of alkalies added to the soil containing much organic matter is that besides neutralizing the natural sourness it favors to a remarkable degree the growth of the nitric ferments, and so promotes nitrification. A trace of alkalinity in the soil and air, moisture, warmth, carbonaceous food and ammonium compounds constitutes favorable conditions for nitrification. On an acid soil most crops, and especially grain crops, are subject to disease, and root crops are apt to fail altogether on such land, even if it has been liberally supplied with dung. Up to a certain stage, grain and root crops grown under such conditions appear to thrive well, but as the season advances they receive a check, and at harvest time yield a miserable return. It is impossible to doubt that carbonate of soda or potash are useful in agriculture. Carbonate of potash, either in the form of crude potash or of the pearl ash of the shops, has hitherto been considered too high in price to admit of its extensive application to the culture of the land. This reason, however, does not apply to the carbonate of soda (soda ash), which is sufficiently low in price to allow of its being applied with advantage, under many circumstances. In the case of grass lands which are overrun with moss, or such as abound largely in vegetable matter, it may be expected to produce good results. It may be applied in a fine powder as a top dressing, and generally where wood ashes are used. It greatly hastens the growth and increases the produce of the strawberry, and should be applied early in the spring. Many experiments have shown that both of these alkaline carbonates may be employed in the field with advantage to the growing crops. In reference to their mode of action, it may appear that potash is the more likely of the two to be beneficial to our cultivated crops, inasmuch as the ash of those plants which are raised for food is generally much richer in potash than in soda. This arises from the more abundant presence of potash in the soil generally, for it has been demonstrated that soda may take the place of potash in the interior of plants without materially affecting their growth. Another purpose these carbonates seem to serve is that of combining with and rendering soluble the vegetable matter of the soil, so as to bring it into a state in which it may be readily conveyed into the roots of plants. The use of muriates and sulphates of the fixed alkalies operate differently. Thus the muriates stop or delay the fermentation of the soil and prevent its nitrification or, at least, retard it. Carbonates decompose the silicates of the soil, while sulphates and muriates tend to retain them in their original conditions, and they are, in that case, not prepared to act as food for plants. The use of chloride of potassium or chloride of sodium, checks the formation of starch and sugar in many crops where they are specially important. Several observers have noticed that where gypsum (all superphosphates contain large quantities of it) is mixed with decaying organic matter, it acts as a preventative, delaying its decomposition until which it is not food for plants. For some reasons, not quite satisfactory to themselves, some of the scientists of the world came to the conclusion that sodium has no useful place as a plant food. It was declared that its presence was not only unnecessary, but that it was not found in many plants. Yet, with a discovery of a process whereby one-millionth part of soda could be detected, it was found present in every plant analyzed. Still it was continued to be voted useless. But by recent experiments by German chemists—A. Atterburg and Wagner, each by himself—it has been found that the presence of soda in the soil causes the plant to use less potash, supplying its place with the soda. On our granite soils it would appear from Dana's Muck Manuel, page 57, that in every 100 pounds of granite there are 7½ pounds of potash and three-eighths of a pound of lime. Differ, as opinions may, about the how and the why of the operation of lime and alkali, it is evident that unexhausted and exhaustless stores of these substances are already in barren pine plains. Let it be supposed that these are formed of the drift of granite, and the amount per acre of lime and alkali, taking the soil only six inches deep, would be 3,626 pounds of lime, and 73,311 pounds of potash, or nearly a ton and a half of lime, and thirty-six tons of potash.

Our granite soils would appear to contain potash enough to last for ages, locked up they may be insoluble combinations, but liberated more cheaply by the addition of carbonates of lime or soda to the soil than by the addition of a further supply of potash. It is not the question whether a plant can thrive on soda alone entirely without potash, or whether a plant will thrive on potash alone entirely without soda, as in no instance is such a contingency likely to happen. There is no doubt a plant will thrive better with both potash and soda than either one alone, a deficiency of one will be made up by the other. The practical question for the farmer is whether he can get as good results in his crops if he manures with soda salts as potash salts. As soda salts are very much less in price, muriate of soda (common salt) costing but $5 per ton, while muriate of potash costs $40 per ton, and one is as good as the other. The farmer who needs to apply an alkali to his soil, as they are equally beneficial, will make a great saving by using soda salts. I can say from an experience of over twenty-five years that I have produced as good, if not better, results with soda than with potash salts. The carbonate is a better form than the muriate or sulphate in which to use them. It having been stated that I am the only one who thinks that soda can be substituted for potash as a plant food, and that the idea is original with me, I extract the following from Dana's Muck Manual, fifth edition, 66th page, published in 1855, from which it will be seen that it is not my idea, neither is it new.

The relation of agriculture to silicates and salts, and to the composition of plants, is of the highest interest. As silicates and salts compose all the earthly ingredients of soil, so are they equally constant in plants. The deduction to be drawn is, the sixth principle of agricultural chemistry, soil consisting chiefly of one silicate, or salt, is always barren. The inorganic elements of plants exist in combination chiefly with organic or vegetable acids. Each plant forms acids in definite quantity, proportionate to the size, age and part of the plants: the acid being constant, the bases to saturate them will be equally constant. A beautiful chemical law governs this saturation of the vegetable acids. It is the law of substitution, analogous in part to the law of isomorphism, or the law of similar forms; it is perhaps connected with that, so that the elements of isomorphous groups can only be substituted for one another. The law of this substitution is that the body replacing another, must be, not an equal, but an equivalent proportion: that is, replaced by a proportion containing the same quality of oxygen.

It is a well-established fact that plants growing on soil containing a due mixture of earthly ingredients, always select a due proportion of each, according to their functions; yet, if to such soil an excess of either of the alkalies, or of the alkaline earths is given, an excess of potash, soda, magnesia, may be taken up by the plant, to the exclusion of the usual proportion of another; hence, it may be established as the seventh principle in agricultural chemistry, one base may be substituted for another in equivalent proportion.

This is a very important law in the agricultural relations of the inorganic parts of soil. Whatever may be the office performed by these in the living structure, none is of higher value than this, that they may be thus substituted, the one for the other. It is a fact of the highest practical value. Its value will be perceived when it is considered that in soil containing originally all the elements essential to a crop becomes exhausted of one, yet another may be substituted, which combining with the organic acid of the plant, enables this to perform and perfect all its functions.

Experiments on the replacement of lime by strontium in plant nutrition by E. Hazelkoff is quoted in the United State Experiment Station Record, Vol. V., No. 1, page 698:

The experiments here reported were of two kinds: (1) with barley and beans in Wagner vegetation boxes; and (2) with horse beans and corn in water culture. From these experiments the author draws the following general conclusions:

(1) Strontium does not injuriously affect the growth of plants.

(2) It is taken up by the plants and appears to take the place of lime as a plant food.

(3) This replacement of lime by strontium appears, however, to occur only when there is not a sufficient supply of lime and other elements for the building up of the plant.

Again, the United States Record of Experiment Stations says:

The results, the author believes, clearly show that sodium may fill a very important function in case of a deficiency of potassium, and it is therefore not to be regarded as an altogether useless plant constituent; these experiments, he stated, show that the practice of supplying salt to the soil is a national one from a scientific standpoint, and that the large amount of sodium salts contained in many of the Stassfurt salts is not to be regarded as useless ballast, but as possessing certain values for the nutrition of plants.

This reasoning must also apply to nitrate of soda, and makes that article the cheapest source of nitrogen in the market when the value of the alkali is reckoned and not considered as useless ballast. Bulleton No. 28 of the Rhode Island Experiment Station, 1894, says:

In the use of the muriate and sulphate of potash, kainit and sulphate of ammonia the crops remove chiefly the basis, leaving the greater portions of the acids behind, and their continued use without recourse to occasional liming, except in case of limestone soils, must tend toward increased acidity, while nitrate of soda which furnishes its nitric acid to the plant, would doubtless tend to produce the opposite result, owing to the fact that the plants do not remove all of the soda, in consequence of which the residuum would perform the functions of a base by combining with the natural acids of the soil. This action, together with the direct availability of its nitrogen and the fact that the soda not only liberates potash, but may also be of some direct fertilizing value to certain plants, serves to explain the beneficial action of nitrate of soda as compared with other forms of nitrogen, when used for several consecutive seasons on our acid soils.

Prof. Storer, in his works on agriculture, says:

The efficiency of a dressing of carbonate of soda to promote the decay of humus and the disintegration as well as binding of the soil there can be no question. One merit of the carbonate of soda is that it can dissolve to an appreciable extent phosphate of iron, such as is found in the soil.

Experience has proved that the Stassfurt fertilizers, used as such, are decidedly inferior to wood ashes.

The explanation seems to be that the sulphate and chloride are devoid of the alkaline quality which is so marked a peculiarity of carbonate of potash, which, as is well known, is the effective agent in wood ashes.

Dr. Dana's ninth principle of agricultural chemistry is: "Carbonic acid and the carbonates decompose the earthly alkaline and metallic silicates of the soil."

Tenth principle: "The base of all salts act ever the same. Pecularity of action depends on the acid of the salts."

Prof. Johnson, of the Connecticut Experiment Station, quotes Dr. Maercker, of the Hailie Experiment Station, Germany, on the use of muriate and sulphate of potash by themselves, as corroborating the results of his own experiments: "The conclusions established are that sulphate of potash is far preferable to any form containing chlorine for potatoes, sugar beets, to-

bacco, fruits or any crop where the formation of starch is specially important ;and that the results sometimes obtained from the use of any potash salts when used alone, are often due to their indirect action in dissolving the plant food ingredients already in the soil, feeding the crop at the expense of the soil, and not from their own resources; and that common salt (chloride of sodium) or plaster would frequently do just as well." While, as Dr. Maercker says, "there is no reason to believe that the potash salts containing chlorine are injurious to vegetation, yet potatoes and sugar beets form an exception; since the starch or sugar production is decreased by muriates, and tobacco is also injured by them in regard to its burning quality." He further states: "That the muriate decreased the starch yield more than the sulphates, especially when applied late." In short, says Dr. Maercker, the good effects produced by potash salts, muriate, sulphate of potash and kainit cannot be attributed to any potash supplied by them, for the simple reason that the common salt (that contains no potash, but simply chlorine and soda) produces results just as good." From the unquestioned authorities already quoted, it appears that common salt (chloride of sodium) produces results just as good as muriate of potash (chloride of potassium). Why, then, not use common salt in mixed fertilizers, instead of muriate of potash? Salt can be purchased at $5 per ton, while muriate of potash costs $40 per ton, and kainit, which contains only one pound of potash in eight pounds, has double the number of pounds of common salt than it has of potash, can be bought for $9 per ton, and is extensively used, particularly in the South, and is there considered a potash salt. Results of experiments with kainit are stated in numerous experiment station bulletins, and from them it appears that kainit, which contains one-half more soda than it does of potash, produces better results on crops than muriate or sulphate of potash. Prof. Storer, in his valuable work on agriculture, says: "In ordinary soils the potash appears to be held for the most part in combination with silica and alumina (or iron oxide and lime). The importance of the existence of these complex silicates cannot be too strongly insisted upon. Were it not for the restraining power the potash in the soil would soon be washed out and carried into the sea, for, excepting the silicates, all the ordinary potash salts are readily soluble in water. It is precisely because soda is less readily retained than potash is by the double silicates in the soils that the sea is salt with chloride of sodium. Chloride of sodium is dissolved out from the soil and carried to the sea by the ground water more readily than any other saline substance." The natural inference then is that on most soils to replace the great quantity of alkali lost, the addition of soda in the form of a carbonate, not a muriate or a sulphate, would be more beneficial than to add potash in these forms.

Sir John B. Lawes says: "Although potash, phosphoric acid and nitrogen are the chief manure ingredients in barnyard dung, the manure ingredients in artificial foods and in artificial manures, still the difference in form in which these substances are met with greatly affects their value. The present method of analyzing manures does not properly recognize these distinctions and the valuations founded upon these analyses are altogether false and erroneous."

Thus it appears that the form in which alkalies are applied to the soil greatly affect their value. Chlorides and sulphates are in a very inferior form to the carbonates. Their action on the soil and plant is entirely different. Carbonates and nitrates are plant nourishers, sulphates and muriates are plant poisons. Alkaline muriates are beneficial, however, when added to the manure heap, keeping down the heat and preventing the fermentation. They are sometimes used to check vegetation, and employed not unfrequently to hinder the growth of grain crops, or, rather, to prevent the stalks from becoming too rank on rich soils or on soils too highly charged with nitrogeneous matter. Chloride of potassium closely resembles chloride of sodium (common salt) in appearance, solubility in water, taste and action in the soil.

When pure it contains 52.4 per cent. of potassium and 47.6 per cent. of chlorine. Sodium salts are, however, not characteristic of vegetable life in the same sense that potassium salts are. Thus, while the latter alkali is always present in larger quantities in certain organs of the plant than in others, sodium appears to be generally equally diffused throughout the whole organism. It is also a remarkable fact that the sodium salts contained in the ashes of plants are insoluble in water, as they combine with the phosphates of the alkali earths to form insoluble compounds. For this reason the presence of sodium compounds has been often overlooked. It is now known, however, that with many soils, lime, magnesia and potash can be given to the crop by applying any soluble sodium compound to the land. Bulletin No. 22, United States Department of Agriculture, office of experiment stations, reports agricultural investigations at Rothamsted, England, during a period of fifty years, in six lectures delivered under the provisions of the Lawes Agricultural Trust by Sir John Henry Gilbert, M. A., FL. D. E. R. S., etc., under the auspices of the Association of American Agricultural Colleges and Experimental Stations in November, 1893. On page 159 is given the result of wheat on plots Nos. 12 and 13 as follows: "On plot 12, in addition to the ammonium salts and superphosphate, sulphate of soda was applied, but the plot had received potash prior to 1852. The first twenty years after 1852 produced an average yield of 33⅞ bushels per acre, the second twenty of 27½ bushels, and the whole forty years of 30¾ bushels. To plot 13, besides the ammonium salts and superphosphate, sulphate of potash was applied each year of the forty, and it had also received potash previously. The average annual produce was, over the first twenty of the forty years, 33⅞ bushels; over the second twenty, 29⅝, and over the forty years, 31¼ bushels." On page 163 is stated: "Referring to the columns relating to soda, it is seen that considerably smaller amounts were found in the produce of wheat than in that of barley. But, as in the case of the barley, the quantities of soda per acre in the total crop were greater where there was a marked deficiency of potash than where soda was actually supplied, while the smallest amounts were where the supply of potash was greatest. Probably the greater amount of soda taken up by the barley than by the wheat is connected with the less root range, and much shorter period of collection in the case of the spring sown crop. In both crops by far the greater proportion of the soda is found in the straw; but there is more in the grain of the barley than in that of wheat, due doubtless to the palese or chaff being adherent and included with the grain in the case of the barley, but not in that of the wheat." It will be noticed that the average yield of wheat for forty years was one bushel per acre more where the sulphate of potash than where the sulphate of soda was used. If this falling off in the yield for the last twenty years was for the lack of alkali, it is easily accounted for, as but 100 pounds of sulphate of soda was used annually on plot 12, while on plot 13, 200 pounds of sulphate of potash were used annually.

REASONS FOR NOT ADMITTING THAT SODA CAN TAKE THE PLACE OF POTASH IN PLANT GROWTH.

It has been stated for so long a time and so persistently that the only constituents that were needed to be applied to the soil to produce remunerative crops, were potash, phosphoric acid and nitrogen; that the soil contained enough of the other constituents and that no addition of them to the soil was needed; also that nitrogen was the most expensive substance in fertilizers. Now, for those financially interested in potash salts and those fertilizer manufacturers who use them to admit that soda can be substituted for potash as a plant food, would be suicidal to turn in a business point of view, as no farmer would use potash salts at a higher price than he can get soda salts for which are just as good. Again, if it should be admitted that soda is as good as potash for a plant food, then the soda in nitrate of soda would have a value, and two pounds of soda are equivalent in alkaline action to three pounds of potash. It is conceded for certain crops, at least, that muriates are inferior to sulphates, and that these are inferior to carbonates or nitrates. Therefore, reckon the soda in nitrate of soda at 5 cents a pound, and its value equals 7½ cents, as compared with sulphate of potash at 5 cents a pound, which is the valuation many of the experiment stations put upon it.

100 lbs. of nitrate of soda at 2⅛..$2.12
Contains 16 lbs. nitrogen at 2c... .32
Contains 36 lbs. soda at 5c.....1.80 2.12

which shows that nitrogen in this form and valuation, instead of being the highest cost ingredient in fertilizers, is the lowest. Soda, in the form of a carbonate, can be purchased in the open market at less than 2c. a pound, in the form of a muriate at half a cent per pound, while potash in the form of a muriate is 4½c. a pound; 100 pounds of soda in the form of carbonate at 2c. a pound, is equivalent in alkaline action to 150 pounds of potash in muriate or sulphate of potash at 4½c. and 5c. per pound, respectively, or 6.75 and 7½c., as against soda as muriate one-half cent, as corbonate 2c. per pound. Prof. Wagner says, in regard to the effect of soda: "There is a direct effect of it, and this direct effect of soda, that is to say, of soda entered into the plant, has proved, during my investigations, of such importance that further researches in that direction are of very great moment." In his opinion "the decided preference expressed by Schultz Lupitz for kainit as a potash (kali) salt, is like the better yield produced by the use of nitrate of soda as against sulphate of ammonia, attributable to the effect of the soda which kainit, as well as nitrate of soda, contains, and which heretofore has not been properly valued."

Andrew H. Ward.

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London Drug Statistics.

The following statistics relate to the receipts and deliveries of some of the leading drugs from and into the London public warehouses in the course of the six months from Jan. 1 to June 30, 1897 and 1896, and to the stocks on June 30 of these two years. Their accuracy cannot be guaranteed, says Chemist and Druggist:

	—Stocks.—		—Imported.—	
Article.	1897.	1896.	1897.	1896.
Aloes .... cs., etc.	2,829	3,977	891	1,197
Aloes ..... gourds	1,819	2,207	....	....
Anise, star ....cs.	180	228	100	1
Arrowroot .. bbls.	12,736	17,240	8,297	11,059
" bxs & tns.	2,005	1,855	186	513
Balsam (medicinal) pkgs.	470	994	230	363
Borax ..... .pkgs.	....	10	1	....
Calumba ..... bgs.	72	341	324	15
Camphor (crude), pkgs.	11,335	14,314	4,564	3,949
Cardamoms ... cs.	1,119	693	2,347	1,279
Cinchona bark—				
S. American .cs.	54	56	....	....
S. American .bls.	13,782	15,189	1,803	1,571
E. I., Ceylon, cs.	404	296	149	175
and Java ..bls.	7,790	9,247	4,568	10,455
Totals	22,030	24,758	6,520	11,201
Cocculus Ind..bgs.	48	146	....	147
Cochineal .... bgs.	2,157	1,701	519	1,039
Cr'm of tartar.cks.	5	5	....	4
Cubebs ..... bgs.	322	358	72	32
Cutch ..... tons	1,090	2,058	421	1,333
Dragon's blood ...	79	151	91	84
Galls—				
China & Jap..cs.	673	1,188	189	1,331
T'key & Per.bgs.	2,671	6,591	3,185	4,056
Gambier ..... tons	995	1,040	2,460	2,803
Gums—				
Acacia .... pkgs.	12,530	16,989	13,027	16,308
Ammoniac .pkgs.	46	50	13	19
Animi and copal ... pkgs.	16,885	11,702	20,305	13,722
Asafoetida. pkgs.	299	692	541	736
Benzoin .. pkgs.	3,228	2,900	1,868	2,797
Damar .... pkgs.	3,018	2,795	2,365	4,454
Galbanum. pkgs.	1	2	....	....
Gamboge.. pkgs.	308	241	236	253
Guaiacum. pkgs.	74	56	42	67
Kino ..... pkgs.	33	20	19	9
Kowrie tons(net)	1,227	981	1,973	1,259
Mastich ... pkgs.	11	28	9	21
Myrrh .... pkgs.	528	681	161	357
Olibanum ..pkgs.	2,294	3,979	2,569	5,235
Sandarach .pkgs.	990	442	1,269	661
Tragacanth pkgs.	2,701	5,021	2,793	5,956
Indigo: E.I. .pkgs.	22,247	17,499	17,608	17,173
" Cen.Am..sns.	1,467	1,946	1,849	2,730
Ipecacuanha, Rio, bls.	238	429	256	251
Other kinds pkgs.	8	15	117	75
Jalap ..... bls.	413	302	249	274
Lac dye ..... chts.	2,541	2,741	....	....
Myrabolans .. tns.	4,198	4,077	2,897	2,114
Nux vomica..pkgs.	547	479	423	239
Oils—				
Castor ..... cks.	70	85	480	574
" .....cs.	354	1,074	339	994
Cocoanut .. tons	371	432	752	955
Olive .. cks.,etc.	870	1,148	839	1,834
Palm ..... tons	15	18	18	48
Quinine sulph..lbs.	88,490	109,421	18,320	9,605
Rhubarb .... chts.	294	478	302	218
Safflower ... pkgs.	171	100	63	65
Sarsaparilla .. bls.	208	285	458	517
Saltpeter ..... tns.	2,955	2,212	4,158	3,669
Senna ..... pkgs.	1,166	840	651	931
Shellac—				
Button .... ..cs.	7,559	7,847	7,106	7,021
Garnet ... ...cs.	7,050	5,767	6,067	4,068
Orange ... ...cs.	35,581	23,736	31,694	29,427
Totals	50,190	37,050	44,867	40,516
Soda nitrate ..tns.	3,278	2,333	15,408	12,649
Sticklac ..... cs.	3,623	3,497	1,827	5,420
Turmeric—				
Bengal .... tons	426	653	19	71
Other kinds .tons	303	499	45	68
Totals	729	1,152	64	139
Vermilion chts.,etc.	7	12	....	17
Wax—				
(Bees'). bls.&sns.	770	1,139	1,218	1,388
" ..cks.&cs.	1,575	1,251	2,286	1,528
(Japan) .... ..cs.	81	208	144	106

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PAINT MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

Complete prices current will be found on page 35

Saturday Evening, July 31, 1897.

As usual at this season, trade is light, but in view of the changes made in the tariff there is rather more inquiry and foreign goods of all descriptions are firmer. The new tariff will cause an increase of about 5 per cent. on iron oxides, including Venetian red and Indian red, which it is expected will cause an advance in prices in the spot market. On the lower grades of Venetian red the advance is expected to amount to 3 or 3½c. per hundred, and on the finer grades the increase in duty, it is understood, will add 5c. per 100 lbs. to the selling prices. The average advance on imported Indian red is expected to be about 20@25c. per 100 lbs., and on other iron oxides the new duty will necessitate an advance of 20@30c. per 100 pounds. The new tariff imposes an increased duty on rose pink of about 35c. per 100 lbs., and Dutch pink is assessed at a rate of 25c. per 100 lbs. The new rate on umbers and siennas is ¾c. per lb., and ochers are made dutiable at the same rate. These figures, it is said, will probably cause a large decrease in the importations. On prepared ivory blacks the new duty is 5 per cent., which seems to give adequate protection to American manufacturers. In other lines the changes do not seem to have been of sufficient importance to have affected market values on spot or future goods. In view of the higher cost of pig lead higher prices have been looked for on white lead, but at the meeting of corroders on Thursday it was decided to make no change in quotations.

White Lead, Zincs, Etc.

WHITE LEAD.—The usual summer dullness prevails in this section for lead in oil, but in the West, if report can be relied upon, there is a decided improvement for all the lead products. At the meeting to-day of the Corroders' Committee it was decided to make no change in quotations for the present, though, should the occasion arise, an advance may be made at any moment. There have been a few single cars of dry lead placed for consumption in this section at regular card prices. There is only a small retail demand for foreign makes of lead in oil, for which they are now asking 8@8¼c. for the old-established brands, as to make and size of the order. As yet the National Lead Company has made no change in its list, and quotes, subject to change without notice, its brands of white lead, dry or in oil, red lead and litharge in kegs: "In lots of less than 500 lbs., 6c. net; in lots of 500 lbs. and over, 5½c.; dry white lead in barrels, ½c. per pound less than the price in kegs; red lead and litharge, in barrels and half-barrels, ¼c. per pound less than price in kegs; white lead, in 12½-lb. tin pails (packed in 100-lb. cases), 1c. per pound over price in kegs; white lead, in 25-lb. tin pails (packed in 100-lb. or 200-lb. cases), ½c. per pound over price in kegs; white lead, assorted, in 1-lb., 2-lb., 3-lb. and 5-lb. cans (packed in 100-lb. cases), 1½c. per pound over price in kegs. Terms—On lots of 500 pounds and over, 60 days or 2 per cent. discount for cash, if paid in fifteen days from date of invoice, f. o. b. at New York. Quantities—To make either of above required quantities, any assortment of packages of either or all of the above articles may be counted. The above prices and terms supersede all previous prices and terms offered by this company."

RED LEAD.—As yet no change has been made in prices for foreign makes, for the reason that about all the large consumers of this class of goods have sufficient stocks to carry them over the summer. Meanwhile agents are waiting to see what action domestic corroders will take. The increase in the duty is 1⅜c. per lb. over the old duty. German makes are dull but firm at 5¼@5½c., as to brand and quantity, for spot stocks, while for arrival a higher price is named to cover the increased duty. English is in the same position, with only limited offerings either on the spot or for arrival.

LITHARGE.—Considerable business has been done for early fall delivery with the glass and rubber trades, who have been anticipating their fall wants before a possible advance in prices occurs in domestic makes. For the present corroders are quoting 4@4½c., as to quantity, less the usual discount terms. English glassmakers' grades are held firm at 6@6¼c. for extra and 4¾@5c. for ordinary spot grades, as to make and quantity, but for arrival a higher price is named.

ORANGE MINERAL.—The demand for French at the moment is light, but prices for spot goods are held firm at 8¾@9c. for extra and 8¼@8½c. for ordinary grades, according to brand and quantity. For arrival a higher price is named. German is nominally quoted for spot goods at 6¼@6½c. for extra and 6@6⅛c. for ordinary grades, as to quantity and holder. For forward delivery an advance in price equivalent to the increase in the duty is named, but buyers, being well stocked, are not anticipating their fall wants. English is in the same position and may be quoted at 6½@6¾c., as to brand and quantity. Domestic is in fair request and held firm for the present at 6½@6¾c., as to quantity, less the usual discount terms.

PIG LEAD.—The market is a shade easier under free offerings of speculative lots, holders of which wish to cover their profits. For round lots for forward delivery they are quoting 4c., but for car lots for prompt delivery a few sales have been made at 3.85@3.90c., as to quantity and quality. The St. Louis market is reported higher, with sales of several round lots at 3.70@3.75c.

ZINCS.—A fair consuming demand is reported for the home trade for prompt delivery, as many of the grinders are anticipating their fall requirements. There is an increased export demand, but the high ocean freights in a measure restrict trading to some extent for that outlet. Prices for the present remain unchanged at 4@4½c. for jobbing parcels, as to quality and quantity, with ¼c. less for yearly contracts. French in oil has been advanced, and is now quoted at 9¼@10¾c., as to quality and size of the order.

Dry Colors.

REDS.

CARMINE.—The market remains quiet, only occasional small jobbing orders being reported. Prices are somewhat irregular, owing to competition, but there has been no quotable change in prices, which are $2.20@2.25 for bulk, and proportionately higher on small lots.

VERMILION.—There is not much doing at present in domestic, but the feeling is strong, in sympathy with the position of the raw material. Quotations are somewhat nominal in the absence of important demand for spot or future delivery at 54@55c. for bulk, smaller quantities being held at 55@57c., though it is possible that these figures might be shaded by some sellers. American vermilion is slow of sale, and prices are nominal. The final solution of the tariff question seems to have been without immediate influence upon the market for imported vermilion. Prices are unchanged, and there is little doing, either on the spot or for forward shipment.

VENETIAN RED.—The new tariff adding about 5 per cent. to the cost of importation has caused a stronger feeling in the market, but has not resulted as yet in any advance in quotations nor caused a larger movement of spot stock into consumption. The nominal quotations on English are 1½@1¾c. for the finer kinds, and .90@1¼c. for medium and lower grades. Domestic is held at 1@1½c. for the medium and better grades, while inferior qualities may be bought down to .75c., and possibly lower.

INDIAN RED.—The new tariff bill increases the duty to about 20c. per 100 lbs., and as a result the market is firmer, though not quotably higher. Other iron oxides will have to pay 20@30c. per lb. under the new tariff law.

BLUES.

PRUSSIAN.—There is a good jobbing demand, but buyers show no disposition to anticipate requirements. The

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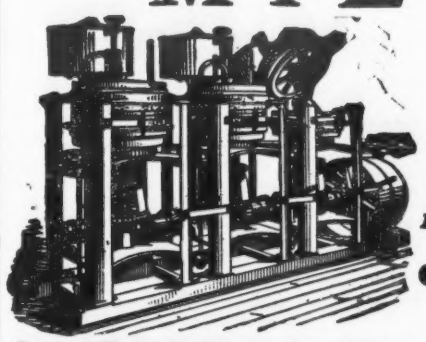

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increase in duty to 2c. per pound seems to have been without influence on spot market values. For chemically pure the nominal quotations are 29@32c., as to seller and quantity, but some makers, it is understood, are still ready to shade the inside price on large orders.

CHINESE.—There is little demand at the moment and prices are somewhat nominal at 30@33c., as to seller and quantity, but it is possible that large buyers might do better.

SOLUBLE.—There is a good demand and manufacturers are kept busy filling orders for both prompt and future delivery. Prices are steady and unchanged at the range of 30@35c., as to quantity and seller.

BLACKS.

The increase in the duty on drop and ivory blacks, amounting to 5 per cent., has not had any influence upon the market values. Carbon black is in very good demand and the market is firm. Lampblack is selling quite freely upon both home and export orders at the quotations, though most of the sales are of small quantities. There has been no change in prices, the market closing steady.

BROWNS.

The new tariff bill imposes a duty of ⅜c. per pound on umbers and siennas, which has caused a stronger feeling in the market. No important business, however, is reported, either on the spot or for arrival. Domestic umbers and siennas are reported to be in fair demand for the season and prices are maintained.

GREENS.

There is little doing in paris green and prices are merely nominal. In other green pigments the movement is of a light jobbing character, buyers taking only what is necessary to cover small present requirements.

YELLOWS.

OCHERS.—The new tariff bill seems to have been without influence upon the market. Trade is light and prices are unchanged. Domestic ochers are quiet and unchanged, but the feeling is firm. The new tariff provides for a higher rate on chrome yellows, but market prices have not yet been affected, competition between the manufacturers seeming to prevent an advance.

Miscellaneous.

BARYTES.—There is little doing at present either for prompt or future delivery and prices are somewhat nominal. We quote German sulphate at $17 @18 for No. 1, and $14@15 for No. 2. Domestic is held steadily at $15@16 for No. 1, $12.50@13 for No. 2 and $9.50@10 for No. 3, with proportionately higher prices on the extra floated grades.

CHINA CLAY.—Owing to the increase in duty of 50c. per ton, the market is firmer. The demand, however, is only fair, and no business of consequence has come under our notice during the week. There is a scarcity of medium and lower grades, and on these prices are relatively higher on the spot than on the finer qualities. We quote $15@18 for the best grades, as to quality and quantity. Medium at $12@14.50, and the lower grades at $10@12.50, as to quality and size of order. Domestic is firm but quiet at the previous quotations of $8@12, as to quality and size of order.

COBALT OXIDE.—The market is dull and prices are nominal at the combination quotations.

FULLER'S EARTH.—There is not much demand, but a steady feeling prevails owing to the increased duty. At the close holders asked 80c.@$1 for powdered and 75c. for lump in car load lots, several sales of carloads being reported at these figures.

TERRA ALBA.—The new tariff increases the duty, and holders have accordingly raised their quotations about 10c. per 100 lbs. Buyers do not seem to be interested and the market closes quiet. The present quotations are 80@90c. for English, 70@85c. for imported French, 65@75c. on American ground French and 45@50c. for No. 2 domestic.

TALC.—There has been no change in the market and little improvement in the demand. The quotations at the close were nominal at $1.45 for French of the better grades, $1.25@1.30 for medium and 80@90c. for the poorer qualities, as to seller and quantity. Domestic is dull and nominal.

WHITING.—The market remains dull and prices are unsettled owing to continued sharp competition. The nominal quotations on jobbing lots are 35@40c. for commercial, 45@50c. on gilders', and 50@55c. on extra gilders, as to quantity and seller, but large buyers might do better.

Glues.

We have still to report a dull market, present consuming demands being light and buyers showing no disposition to anticipate requirements.

Glass.

WINDOW.—The price of French has been advanced to 60, 10 and 5 per cent. discount, and American to 60 to 20 per cent. The increased prices are due to the higher rates of duty exacted by the new tariff bill and the action of the American makers in withdrawing quotations. A sharp advance in the price of American glass is looked for at an early day. It is said that the prices now quoted on imported glass do not cover the additional cost imposed by the new tariff, and it is understood that the importers are contemplating getting out a new price list.

PLATE.—Trade is fair for the season and the market remains firm and unchanged.

(Special Correspondence to the Reporter.)

The Treasury Department Wrestling with the New Tariff.

Washington, July 30, 1897.

The Treasury Department has spent a busy week endeavoring to solve the numerous problems raised by the passage of the new tariff law, Secretary Gage has made a formal decision in which he holds that the new tariff law which was passed last Saturday and signed by the President at 4 o'clock on the same day, went into effect on midnight of Friday, the 23d instant. This is in accordance with the contention heretofore made by the department that as the law cannot take account of parts of days, and as the tariff act specially provided that the new duties should go into force as soon as the bill became a law, hence it took effect with the first moment of the day it was signed, that is, at midnight of the day before. This contention will be stoutly resisted by a large number of importers who brought in large quantities of goods on Saturday. Many of the powerful ocean steamers rushed into port in the hope of entering their cargoes before the new act should take effect. This effort was without avail, for on Saturday Assistant Secretary Howell sent the following telegram to all collectors:

"The President having this day approved the tariff act recently passed by Congress, the tariff act of Aug. 28, 1894, so far as it has been superseded by the new act, became void and of no effect at midnight of July 23, 1897. All merchandise entered at the custom houses on and after July 24, under the rates of the act last mentioned, will be subject to liquidation under the provisions of the new act.

"All existing regulations relating to the importation of merchandise, and the proceedings pertaining thereto, will continue in full force and effect unless duly modified or revoked."

In support of the attitude of the Treasury Department the decision of the Board of General Appraisers, subsequently affirmed by the courts in the case of the Wilson law, is cited. This act was passed by Congress Aug. 15, and, although nevr approved by the President, became a law Aug. 28 by reason of the lapse of the constitutional ten days, during which the President did not return it to Congress either with or without approval. In that case the board held that "the tariff act of 1894 became operative as a law at the hour of midnight on the 27th of August, 1894, or, what is the same thing, at the first moment of the 28th day of said month, just as if the President had approved or signed it on that day. It may be admitted that Congress possesses the constitutional power to make revenue laws retrospective so as to impose additional duties on goods previously imported, or to remit or to realease such duties altogether, whatever may be said as to the justice or injustice of such legislation. Such a law would divest no vested rights of importers nor impair the obligations of any contracts between them and the Government, nor be subject to any other constitutional objection, as far as we can see."

The Secretary of the Treasury has prepared to make an early test in the courts of the question as to when the law took effect, which will be raised by the attempt of the Government to collect duties upon imports made early on the morning of July 24, before the passage and signature of the bill. Should the collection be resisted the case will go first to the Board of General Appraisers, and then upon appeal to the United States Circuit Court, the United States Circuit Court of Appeals and the United States Supreme Cour, in order. It is probable that a decision will be reached very early in the coming terms of the courts, as all parties will unite in an effort to have the case advanced on the several dockets.

A close examination of the new act by customs officials discloses some important changes from the present law, which it is believed are in the nature of errors of commission. Under section 23 of the Wilson law the profession of custom house brokers was formally recognized and their employment regulated. The text of this section was as follows:

"Section 23. That the Collector, or chief officer, of the customs at any port of entry or delivery, shall issue a license to any reputable and competent person desiring to transact business as a custom house broker. Such licenses shall be granted for a period of one year, and may be revoked for cause at any time by the Secretary of the Treasury. From and after the first day of Augst, 1894, no person shall transact business as a custom house broker without a license granted in accordance with this provision: but this act shall not be so construed as to prohibit any importer from transacting business at a custom house pertaining to his own importations."

The effect of this provision was to give the Secretary of the Treasury authority to control brokers in a manner that has proven very salutary. It has only been necessary to invoke the provisions of section 23 on two or three occasions, but there is no doubt that its presence on the statute books has done much to prevent improper practices. In the haste incident to the passage of the new tariff law provision was made for the repeal of all administrative sections of the Wilson act, including sections "1 to 24." Thus the paragraph regarding brokers' licenses stands repealed, and there is now no legal restriction upon this employment. Licenses not being required, the Secretary has no power to punish parties guilty of irregularities. The customs division of the Treasury has given considerable attention to this question, and an effort will be made to devise some means of meeting the deficiency in the law by regulations, but it is unlikely that any adequate measures can be devised. The first effect of this important omission will doubtless be the springing into existence of a large number of so-called custom house brokerage firms, and importers will, therefore, do well to protect themselves by employing only brokers of recognized standing.

A highly important provision of the new law will be especially interesting to houses which have heretofore sought to obtain Government contracts. The Wilson law provided that the Government might at any time import articles for its own use free of duty, and under these provisions the departments occasionally made contracts with foreign manufacturers for goods that could be supplied duty free at lower prices than similar American products or duty-paid foreign goods. Occasionally the method was varied by the department's purchasing certain ingredients abroad and furnishing them duty free to the manufacturers of the product contracted for. It will be remembered that the Government not long ago undertook to secure a supply of smokeless powder by offering to furnish to the contractor therefor foreign alcohol imported duty free. There have been many other similar instances of the application of this provision of the Wilson act, but as paragraph 385 of the old law under which such goods were brought in free has been repealed by the Dingley act, the Government hereafter will be obliged to pay duty on all articles imported for its own use. While the payment of duty by the Government may appear merely as taking money out of one pocket to place it in another, in practice the new law will be very effective, as the duties will have to come out of the appropriations made for the purchase of the articles desired, and thus the advantage to be secured by purchasing foreign goods because of their cheapness will disappear.

Manufacturers of chemicals used in the production of explosives will, no doubt, find the new law specially important as relating to their industry, as the Government has frequently passed special laws with regard to the free admission of munitions of war or products employed in their manufacture. At the time of the Chilian war scare an act was passed admitting free of duty smokeless and other powders, nitro-glycerine, etc., and while probably it was the intent of Congress that this law would apply only to purchases made under the emergency appropriation at that time passed by both houses, yet for a considerable length of time thereafter the provision was construed as general in its character and as applying to all Government purchases. It was finally superseded by the Wilson act, which enabled the Government to import merchandise, and in turn now gives place to the Dingley act, under which duty must be paid, even though the general Government be the consignee.

There has also been some question as to the proper classification of orange peel, or lemon peel, etc. Under the Senate bill, if these articles were preserved, candied or dried, they were dutiable at 2½ cents per pound, and were free if "not preserved, candied or otherwise prepared." It has been contended that orange or lemon peel in brine was neither preserved, candied nor prepared, but the department holds that it

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An early test case will be brought to determine an important question with regard to the duties to be paid on articles classified by weight, which were imported prior to July 24, but not withdrawn from warehouse until after that date. Under the terms of the Dingley law all articles dutiable by weight must hereafter pay duty upon such weight at time of withdrawal. It is contended, however, that this provision cannot be made to apply to articles placed in warehouse prior to the passage of the new law, as a contract then existed between the importer and the Government under the Wilson act which guaranteed to the importer the right to withdraw his goods on the basis of their weight at the time of withdrawal. This privilege has been of great importance in many lines of importations, owing to the fact that the goods while in bond have lost a very considerable proportion of their weight by the evaporation of moisture contained therein. The department holds that the new law affects all such importations, no matter when placed in warehouse, if they were not actually withdrawn before the new law took effect, and the contest over this point promises to be a spirited one on both sides.

Petroleum in Kentucky.

BY COL. A. C. FERRIS.

A brief outline of the geology of Kentucky seems necessary to make clear a proper understanding of its oil-producing territory and the ease with which its capacity for oil production can measurably be reduced to some degree of certainty.

About one-third of the eastern part of Kentucky, including its principal coal deposits and its valuable timber lands, bounded by the Ohio, West Virginia and Virginia State lines, and including the Apalachian Mountains, which traverse this part of the State from northeast to southwest, and outlined on the west by an angular line from 83° longitude west from Greenwich on the north, to 85° on the south, is, on its surface, a carboniferous formation, except where can be traced on its western line of the angle the upper and lower sub-carboniferous, joined on its western side by devonian and upper silurian; the southern counties on this line by largely upper carboniferous down to the Tennessee State line. From the 83° of longitude on the Ohio line, directly west to and beyond the 85° on the Indiana State line, and then running directly south to the 37½° of latitude, including about three counties, the surface formation is mostly the lower division of the upper silurian, with displays of the lower silurian stratum where the Kentucky River has cut its bed hundreds of feet deep through the limestone, which arise, as perpendicularly and as true as if laid up with care by the hand of man. South of this section, to the Tennessee line, comprising about five counties, comes distinctly the sub-carboniferous, with a dividing line between the two

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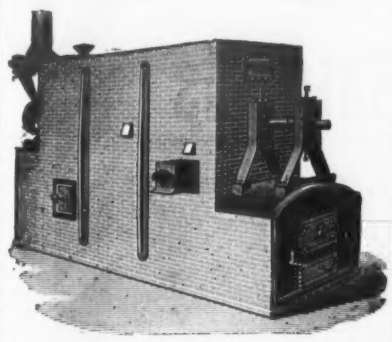

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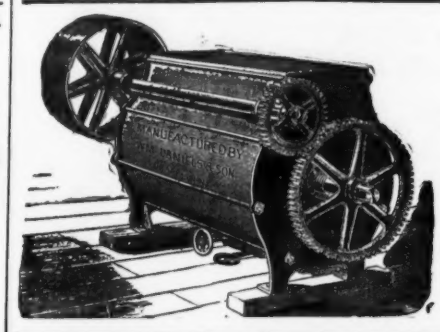

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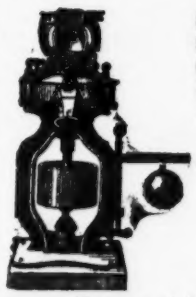

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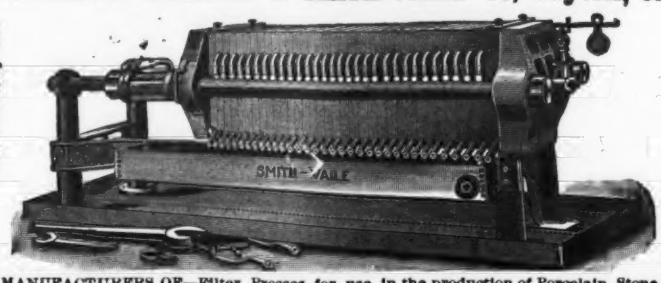

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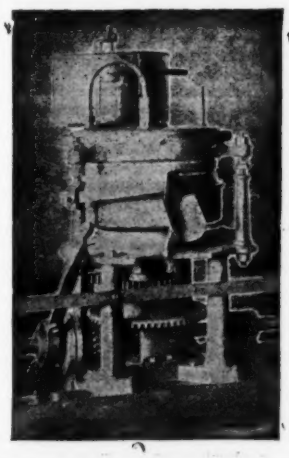

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sections of the devonian—quite narrow in its proportions.

Next, westward, comes a semicircle. Bounded on the south by the Ohio River, reaching about sixty miles in sweeping south to the Tennessee line and, curving north westward, it again reaches the Ohio River with a width of about forty miles, including three counties. This section is distinctly subcarboniferous. Included in the area inclosed by this semicircle are about fifteen counties distinctly carboniferous. The distinctly traceable oil belt runs with the angular line spoken of from the Ohio line to and over the Tennessee line for a width of several counties, but is most pronounced in Clark, Powell, Estill, Madison, Montgomery, Bourbon, and terminates at the State line with Cumberland, Wayne and Clinton counties. This gives a breadth of over one hundred miles and a length southward of about two hundred miles, on which the presence of petroleum and gas is indicated in various ways in large sections of the territory so bounded, as well as in other parts of the State, but not so distinctly and abundantly made manifest.

The second division, bounded and designated as lower silurian, includes the celebrated blue grass counties, five in number. The silurian over this entire range of counties has a depth of stratum of but a thousand feet to sea level, including the Trention, so famed for oil and gas in Ohio, and but a limited distance separates it from the Chary, not reaching two thousand feet from the surface. And in this section is most evident the most remarkable action of some work or freak of nature in first piling up hills or mountains, perhaps of coal or other minerals, and then sweeping them away for use elsewhere. And as if it were not enough to give man here the very best and most exhaustless soil in the United States, with mountain walls of coal, minerals and timber surrounding them, she has thrown in oil and gas that are waiting for the driller, for railways, pipe lines and refineries, to still further add to the riches of this State. And with all that nature has done for this favored State, she is falling behind in position, exhausting her wonderful soil with tobacco culture, and her young men pushing further West and intent upon obtaining occupation elsewhere.

In his explorations in Kentucky the writer has found this oil in outcropping strata of rocks in Madison County at an elevation of fifty feet above water level, and especially along the waters of Muddy Creek and other branches of the Kentucky River; its pressure is manifest in scores of localities, sometimes oozing out when a stick is thrust into the channel of the creek, or the soil is stirred up along its banks, or bubbling out of the hillside with the springs of water that feed the creek; or on breaking the outlying rocks which everywhere seem to be saturated with the oil, certain exposed strata favorable to its retention being charged with it, or even on climbing a hillside fifty feet above water level, and breaking certain strata of arenaceous limestone (called by the natives "oil rock"), it breaks forth freely; and even in breaking loose stones of small size or outlying boulders the oil is equally found as in developments at a lower level.

Gas is also manifest in many directions, and near the mouth of Muddy Creek the oil is constantly escaping in liberal quantities in the middle of the Kentucky River.

In this and adjoining counties are several places known as "Paint Creek," "Oil Springs," "Burning Springs," where salt licks in numbers are found, seamed from the presence of oil or salt water, or both, and in these several counties oil lands have been leased in time past, especially in the sixties and at the close of the war, in hundreds of thousands of acres, or by the square mile, by parties who wished to secure for future speculation a good thing in oil territory. These leases or purchases, or bonded sections, whichever they may have been, have a clause in almost all cases that work of well-boring should begin in the transaction, to terminate in three to five years. In a few instances a valuable consideration was paid in cash, and a longer time was given in which to comply with the terms of the contract. But these first leases, or contracts, were almost invariably abandoned, as no buyer or wildcatter came with his engine in time to put money in the speculator's pocket. These lands, in turn, have been taken up by a second swarm of territory hunters, who, in time, have also failed, as the fluctuations in the oil market have taken away the hope of fortunes, and even a third time the Kentucky land owner has been induced to lease to one he hoped would operate in his oil territory, for the faith of the Kentuckian in the productiveness of these lands has never been shaken; but he has always been willing, and now is willing, to develop them at the risk and expense of some one else; and on a par with his faith in oil in Kentucky, which he has seen running from the rocks and creeks of his lands all his lifetime, is his determination that he will never spend one dollar to make a hole in the rocks for this ever-present oil. But in the period just after, or about, the close of the war, there was an interval of wildcat oil adventurers, mostly from the West and Northern States, and some well-boring was done, in great part with horse power, and in some instances with very dilapidated second-hand engines of small capacity, with apparatus to match; with great difficulty and many troubles and interruptions boring to shallow depths mostly two and three inch holes.

In Madison county, at that time, in the vicinity of Richmond, a "company" bored a three-inch hole with a small worn-out engine in a little ravine a hole about 200 feet deep, giving every assurance of a yield of oil in a locality in which the oil seemed to be struggling with its best efforts to reach the surface itself. But, after breaking and losing tools several times, their "sand" gave out, and with that the effort was abandoned. Another party bored across the Kentucky River, and with horse power, at a shallow depth, obtaining some of this peculiar and valuable lubricating oil, which, for a long time after, was obtained with a hand pump, which the neighbors inserted in the well to procure for their own uses, for medical purposes, and for their stock, etc., a supply of this oil.

These developments occurred in a number of counties still further South, on the line indicated for the oil belt.

In two or three instances they set these rigs on fire by the sudden inroad of natural gas, which destroyed their property in several cases, the wildcat driller barely escaping with his life.

On this belt, still further South, are found the shallow Marshall wells, which have produced a small, dirty output for many years past. Leaving this location, and passing further east, we have Barren county, located where the upper and lower sub-carboniferous are both united by a distinctly marked line of separation; on the surface we have a small production of oil that has been continuous for years, but it seems to be an isolated pool, of but very limited extent, without promise of any quantity being gathered from this locality. It may be that oil could be found in a lower horizon, but, as it is so abundant in promise on the true line of the oil belt, and is attainable with less boring, it would seem to be the field of future promise.

Returning again to the oil belt proper, we notice the developments that have been made in Clark, Powell, Bourbon and Montgomery counties, which, as they are all accessible to convenient railroad transportation, and are so assured of oil production, seem to be a desirable field, that must soon wheel into line for the wants of the coming market.

The writer sent an explorer to Kentucky in 1858 or 1859, induced by his faith that oil ought to be found in Kentucky, as his belief was that the so-called "oil belt" extended from the lakes, where he had visited it in Canada, to the Gulf of Mexico, through Ohio, Kentucky, Tennessee and Alabama, and for the public expression of this faith he endured much ridicule in the early "ages" of petroleum. The explorer returned with favorable reports of the extensive existence of oil in Bourbon county in the vicinity of Flat Rock and North Middleton, about fifteen miles from Paris and ten miles from Mt. Sterling. Measures were taken straightway to secure territory in the locality, which is in the heart of the "blue grass" limestone formation. About this time matters were on the point of rupture between the North and South, and owners of blue grass farms declined to lease their valuable lands to Northern men for oil purposes, although well aware of the existence of oil in their section, which annoyed them more or less over a portion of country at least five miles in length by three miles in width, within which boundary were a number of oil springs yielding liberally, and which oil was held in great esteem, both for men and their valuable stock of horses and cattle.

To overcome this difficulty, a resident of Flat Rock (from the north), engaged in milling, who had been there for some twelve years, was taken into the enterprise, as he was a most enthusiastic oil believer and an energetic man. By this means about 3,000 acres of oil territory were secured and operations were commenced by horse power. The name of this Pennsylvanian was S. R. Berry, whose home had formerly been at North Warren, Pa., of which place he is now a resident.

The first boring, which was in Bourbon county, and was the first well ever bored for oil in Kentucky, was made by horse power, with a three inch bit, the tools having been obtained in Pennsylvania, and 150 feet of copper tubing, with pump procured in and shipped from Pittsburg by the writer. The earth, on being excavated to the surface rock for placing the conductor, was a hardened mass of dried and evaporated petroleum, but the well, at fifty feet, was abandoned and a second one started, which, at nineteen feet from surface and in limestone rock, gave promise of a yield of oil. It was bored to a depth of 52 feet, then tubed and seed bagged with muslin and oats, and on being pumped by horse power, after a homely fashion, yielded about three barrels of oil per day, of a gravity of 21 per cent., and a fire test of about 400 degrees, and a cold test of 20 degrees below zero, and has since proved to be a better lubricator than the very best quality of sperm or lard oil.

Another hole was bored in the same locality to the depth of 100 feet, which went through a form of crystallized limestone all the way and proved a duster, although but 150 feet from the first well.

In the opposite direction another was bored 102 feet, which gave gas, salt water and oil and flowed slightly into the creek. By this time the obnoxious feeling had increased to a bitter extent against Northern men in Kentucky, and, as Mr. Berry was an outspoken Northern man and anti-slavery to the last degree, he was captured by some bushwhackers and taken to a graveyard, where he was ordered to dig his grave, and, on its completion, he was notified he would be shot and dumped into it. Mr. Berry threw down the pick and shovel given him; defied them as cowards, and told them to shoot—with some emphatic words. This led them to change their purpose, and after some threats he was given twenty-four hours in which to leave for the North or be hung. Mr. Berry left for safety in the night, crossed a ford of the Ohio and found his way to Cincinnati to the Union army.

The bushwhackers destroyed all the property of the writer and also that of two other parties, who, led by the success of his oil well, had come in from the North, fairly equipped with steam power and each had promising productive wells at a depth of about 300 feet, for which they had provided pumps and tubing, which were forfeited.

One of these wells which flowed in a small way oil of the same quality, after keeping quiet for some six months, suddenly broke out one night with great force and roaring as a gas well, whose roaring could be heard for some miles away. It was a source of terror to the negroes and alarm to the whites, and was finally stopped off after strenuous efforts on the part of the residents of the neighborhood.

The wells bored by Mr. Berry for the writer were plugged, and the earth filled into its place again and were lost sight of, but the Sterling Oil Company, in 1885, secured, by lease, this oil territory, found and reopened these old wells, which after a cessation of twenty-five years, after a little clearing, resumed a yield of about three barrels of oil per week, which commanded on the spot $1 per gallon for lubricating, as when first bored the oil was mostly bought by the Kentucky Central for railway use.

The Sterling Company has made the following experimental borings on this territory, which give every promise of oil and gas:

One well, 32 feet with a good showing of oil of same character, 1½ miles from the first well.

One well, a hundred feet from the above, 75 feet, at first a good showing of oil, but the deeper boring brought in a rush of white sulphur water, which could not be reduced, pumping 200 gallons per minute. Two hundred feet from this last well a good vein of oil at less than 30 feet, but bored 80 feet; brought in a like vein of sulphur water.

A well 200 feet from this, at 70 feet; a show of oil, but no water.

At 500 feet from this, at 100 feet in depth, a good showing for oil.

At 150 feet from this, at 100 feet, a very promising show.

At the next boring of 110 feet a burst of gas, with much noise of an explosive character and a boiling up of oil, which ran to waste in the adjoining creek.

The next well produced an oil of 36 degrees gravity, while all the others were 21 degrees.

A 75-foot derrick was set up (as all the previous borings were by portable engine) and a hole of six inches was bored nearly 800 feet, when the bit was lost and never fished out. This well flowed gas from 350 feet downward, which has continued for years, and, being ignited, illuminated the country around.

The borings in these wells were in limestone of varying texture, but the oil was most abundant in an arenaceous limestone. The storage rock varied from two to ten feet in thickness and was never shot.

Another company received about the same time some 6,000 acres of land on Lulbigrud Creek, in Powell and Clark counties, through which section the Kentucky Union Railroad has been built and is now running, giving connection with through lines generally.

In this section about the year '65, a 100-foot well, 3-inch hole, which gave three barrels of oil per day, was bored by one company with horse power. Another well on the same creek was bored by steam power, at 300 feet produced oil and gas to the top of a 50-foot derrick for some weeks, and quite a large quantity of oil ran to waste in the creek.

Another well, at less depth, was a fair producer, but as transportation was then over a rough road, 30 miles, and no market for oil in the locality, the teaming and freights cost more than the oil commanded, and one after another of those who had producing wells abandoned the territory. None of these wells was bored to a depth sufficient to reach anything but a surface deposit and a gravity of 21°, and none of them was ever treated to a torpedo. One well, bored along Lulbigrud Creek, near Swope's Mill, broke into a gasser while being drilled, sent the tools into the air, blew the driller from his position in a great fright, and continued for some years to roar and blow, to the wonder of the few inhabitants of that section.

The company that leased this territory has done some work on each of its leases; but, like others, has suspended for want of "sand." These oil territories are all in limestone formation, and, like the Ohio oil fields of Lima and elsewhere, fully illustrate the truth of the oft-asserted views of the writer, that the oil is produced in a lower horizon than has yet been reached, and that it will store itself in any stratum of any kind of rock that is sufficiently open, porous or cell-like in its formation to give it storage room.

And hence it follows that oil territory, seemingly exhausted and abandoned, will become measurably productive again, and that surface water, carelessly left to run below by unplugged holes, may not only pass off from that section, but even find its way below, to add again as one of the constituents in the manufacture of hydrocarbon in the great laboratory or workshops of nature below.

Hop Culture in the United States.

BY. W. A. LAWRENCE.

"Westward the star of empire takes its way," and hop culture follows the star. Up to the year 1808 hop culture in the United States was confined to three New England States—Massachusetts, Vermont and Maine. Now, in 1897, there is hardly a hop yard in all those States. The soil of New England is poor and especially deficient in phosphates and potash, two very important elements in the hops. So, the doom of New England hop culture was sealed when some of her sons emigrating to Central New York brought a few hop roots with them and started a few hop yards in Madison County. The New York State hops were not only better in quality than the New England hops, but the New York growers could raise three times as many pounds to the acre. That settled it, and from, say, 1850 to 1865, that small section of New York State which we call the "hop region," lying along and south of the New York Central Railroad from Albany to Rochester, enjoyed a practical monopoly of the hop raising of the United States. But about 1860 the States of Wisconsin and Michigan had discovered small sections of territory within their borders which would produce hops, especially in Central Wisconsin. In 1866 the New York State crop was totally ruined by

an attack of vermin just as the hops were ready for harvest, and Wisconsin growers received 50 cents per pound for their splendid crop. It looked as if Wisconsin was to take the place of New York; but the hop louse reached Wisconsin directly, and now, for twenty years past, Wisconsin hops have disappeared from the market reports. So, during the ten years from 1870 to 1880 New York State resumed her virtual monopoly of hop production. But in that ten years a rival was growing up on the Pacific Coast; and, westward still, from New England to New York, from New York to Wisconsin, from Wisconsin our history brings us to California, Washington and Oregon.

If there is any kind of crop under the sun, from No. 1 wheat to oranges and ostriches, which some part of California cannot produce, I have yet to hear of it. So, of course, she had to have a hop section. Her Russian River hops were a revelation; "fine as silk" in texture, bright golden in color, "clean picked," and second only to the best German hops in "richness" or lupuline, it is no wonder that with "Russian Rivers" in the van the hop production of the narrow California hop region should have gone up from a few hundred bales of Russian Rivers to her present 30,000 to 40,000 bales of "Californias." In Oregon and Washington the growth of the hop industry was as sudden and remarkable as that of California.

In the year 1866 Charles Wood, who had established a small brewery in Olympia, W. T., was raising in his garden a few hops for his own use in the brewery. The reader will recollect the statement already made that in 1866 the crop of New York State failed and the Wisconsin growers realized 50 cents per pound (which means in some instances $1,000 per acre) for their crop. In 1866 Jacob R. Meeker, of Puyallup, Wash. (Territory then), obtained half a bushel of hop roots from the above-mentioned Charles Wood, who had promised to buy the hops to encourage the enterprise. These roots were set out in the spring of 1866 and in the fall of that year the first crop (185 pounds) was sold to Wood at 85 cents per pound, or over $150 for a single bale of hops. It is no wonder that the culture of hops developed rapidly in the Puyallup and White River valleys of Washington and spread from there into Oregon. It seemed for the first twenty-five years, or up to about 1892, as if right here in Washington and Oregon was to be the future hop-growing industry of the United States, with plenty to spare for export. The hops were excellent in quality and the rich new soil produced enormous crops, in one or two well-attested instances reaching the almost incredible yield of 4,000 pounds per acre, and with an average yield per acre of more than twice that of New York State. Then in 1882 hops went to $1 and more per pound, and again in 1886 the entire crop of New York State was cut off by lice, while the Pacific Coast crop was uninjured and brought a good price, and the New York grower got nothing. Not a hop louse had as yet been discovered on the Pacific Coast, and some good judges held that no hop louse could live in that climate. But about five years ago the writer received from Puyallup some leaves of the hop vine well sprinkled with insects which he at once identified as the aphis humuli, or hop louse. The growers in Washington fought the lice vigorously by spraying with a solution of quassia and whale-oil soap; a system which Ezra Meeker, of Puyallup, brought over from England. But, in spite of spraying, the product of Washington has gone down from 40,000 to 10,000 bales within the past five years. The hop land of Washington (excepting the Yakima district, where irrigation is necessary) is mostly in river valleys, rich but heavily timbered, and the hop yards are literally hewn out of the forest. Thus shut in and with plenty of prune trees to furnish hibernation for the lice, no better culture for the hop louse could be devised. In Oregon, however, the land is more open, costs less to clear, and, though lice have been troublesome at times, yet so far the hop industry in Oregon has steadily spread and a crop of 80,000 to 100,000 bales is now a reasonable expectation unless the hop louse shall increase faster than the acreage. In this brief sketch we have now gone over the history of the rise, and, in some cases, the fall, of the various sections of the United States, which from time to time have been found adapted to hop growing. It is safe to say that now, in 1897, the whole territory of the United States has been tested for hop growing, and the culture of hops has settled down at last into New York State in the East, and Oregon, California and Washington on the Pacific Coast. The present acreage of New York State will produce with a fair crop not less than 150,000 bales. With but little larger acreage it has often in past years baled more than that. The Pacific Coast today is capable of producing on its present acreage also 150,000 bales. A normal crop of East and West combined is, therefore, some 300,000 bales (average per bale formerly about 180 pounds, to-day about 190 pounds net hops), or some 100,000 bales per year more than the hops required for consumption in this country in 1897. With a normal export to England of 50,000 bales per year we have still left a surplus in this country of 50,000 bales per year, provided all the hop sections produce each year a fair crop. It has happened for the past three years, namely, 1894, 1895 and 1896, that the hop acreage not only of this country but of England and the Continent, has produced a fair crop all over. Hence the present low price of hops in the market. But no more now than in former years is the hop crop exempt from the many ills that hops are heir to, and which come suddenly and unexpectedly. When one of those failures comes to the crop of England, Germany, New York or the Pacific Coast, hops will go up to higher prices. Until such failure, with a normal production of 50,000 bales per year more than the normal demand for home consumption and export, hops will remain low in price. This is the practical lesson of this brief outline of hop culture in the United States.—American Brewers' Review.

The Constituents of Pennsylvania, Ohio and Canadian Petroleum.

(Continued from July 26, page 21.)

This fraction was boiled with sodium to remove, so far as possible, any chlorine derivative remaining, shaken with sulphuric acid, and again distilled. There was finally obtained about 3 grams that gave percentages of carbon and hydrogen agreeing fairly well for $C_{11}H_{24}$. The low values are due to a small amount of chlorine that was not entirely removed by treatment with sodium:

0.1558 gram of the oil gave 0.4803 gram CO_2, and 0.2115 gram H_2O.

	Calculated for $C_{11}H_{24}$.	Found.
C	84.70	84.09
H	15.30	15.09

In the formation of chlorine derivatives from the purified fraction 196°, Canadian petroleum, 25 grams absorbed 7 grams chlorine. After five distillations in vacuo, 3 cc. collected at 145°-150°, which distilled at 220°-228°, atmospheric pressure, and by analysis gave the values required for $C_{11}H_{21}Cl$:

I. 0.2378 gram of the substance gave 0.1747 gram AgCl.

II. 0.2005 gram of the oil gave 0.5105 gram CO_2, and 0.2097 gram H_2O.

	Calculated for $C_{11}H_{21}Cl$.	Found. I.	Found. II.
C	70.03	.....	69.44
H	11.14	.....	11.62
Cl	18.83	18.18	.....

A determination of the specific gravity of the monochloride at 20° gave 0.8882. With the small quantity of the higher distillates, it was not possible to separate a dichlor derivative in anything like pure condition.

The small amount of the monochloride evidently precluded the possibility of ascertaining with any precision its true boiling point, and the analysis is chiefly of value in determining the number of carbon atoms in the molecule. The number of carbon atoms received still further confirmation in a determination of the molecular weight by the Beckmann method, which gave 187; the formula $C_{11}H_{21}Cl$ requires 188.5.

Hydrocarbon, $C_{11}H_{24}$.

Above 195° (730 mm.) the distillates were small in quantity to 208°, but between 208° and 212° about 300 grams collected, for the most part at 208°-210°. The specific gravity of the crude distillate was found to be 0.7947, and analysis gave the following percentages of carbon and hydrogen:

0.1554 gram of the oil gave 0.4878 gram CO_2, and 0.1982 gram H_2O.

	Required for CnH_2n.	Found.
C	85.71	85.57
H	14.29	14.18

In order to collect this distillate more closely, a portion of the crude oil was treated with fuming sulphuric acid, washed, dried, and the distillation continued. 37 grams of the oil gave 27 grams after purification. After several distillations it collected at 212°-214° under 745 mm., and with the mercury all within the vapor. Two determinations of specific gravity at 20° gave (I.) 0.7851, and (II.) 0.7857. The carbon and hydrogen were also determined:

0.1586 gram of the oil gave 0.4960 gram CO_2, and 0.2105 gram H_2O.

	Calculated for $C_{12}H_{24}$.	Found. I.
C	85.71	75.27
H	14.29	14.74

These values point to the composition CH for this constituent of the Canadian oil. In further evidence as to the correctness of this result, another portion of the crude distillate was shaken with a mixture of concentrated nitric and sulphuric acids, the intense heat at first generated controlled, and after the principal action had ceased the solution was kept warm for some time on the steam-bath. An oily nitro product collected above the acid in considerable quantity, but it was not further examined. The hydrocarbon remaining was then agitated with concentrated sulphuric acid, washed with caustic soda, which removed much more of the nitro product from the oil, then with water, and boiled for some time with tin and hydrochloric acid.

The oil remaining was then washed, dried and warmed during several hours with fuming sulphuric acid, which produced little change and boiled with sodium. After this purification, analysis still gave values required for a hydrocarbon CnH_2n:

I. 0.1383 gram of the oil gave 0.4332 gram CO_2, and 0.1849 gram H_2O.

II. 0.1406 gram of the oil gave 0.1856 gram H_2O.

	Calculated for $C_{12}H_{24}$.	Found. I.	Found. II.
C	85.71	85.41	Lost
H	14.29	14.86	14.68

In forming the chlorine derivatives of this hydrocarbon, 26.5 grams of the fraction 214°-216° was allowed to absorb chlorine until the weight had increased 9.5 grams, and the product was fractioned eight times in vacuo; 5 cc. collected at 160°-170°, which gave, on analysis, the percentage composition required for $C_{12}H_{23}Cl$.

I. 0.2059 gram of the substance gave 0.1515 gram AgCl.

II. 0.2064 gram of the substance gave 0.5357 gram CO_2, and 0.2128 gram H_2O.

	Calculated for $C_{12}H_{23}Cl$.	Found. I.	Found. II.
C	71.06	....	70.79
H	11.30	....	11.46
Cl	17.53	18.20	....

The specific gravity of this chlorine derivative determined at 20°, was found to be 0.8960. The small quantity of distillate collected within higher limits did not permit of the separation of a dichlor derivative in a pure condition. A chlorine determination gave 27.21; required for $C_{12}H_{22}Cl_2$, 29.95. It formed a thick viscous oil that could scarcely be distilled, even in vacuo, without decomposition. At a temperature slightly higher than that at which this product was collected the distillate was largely decomposed.

The series having been determined by these numbers, the number of carbon atoms was demonstrated by the molecular weight, which was found by the Beckmann method to be 172; the formula $C_{12}H_{24}$ requires 168.

What has been said as to the probability that Pelouze and Cahours worked with Canadian petroleum receives further support in comparing their results on the hydrocarbon they separated boiling at 216°-218° with those described above, although certain important differences appear between their results and mine.

The specific gravity assigned by them to the hydrocarbon 216°-218° was 0.796 at 20°, which is practically the same as the specific gravity of my crude distillate, 0.7947, given above. But their description of the properties of this distillate are not in accordance with my observations. Referring to the action of reagents on their product, they state: "Le brome, l'acide azotique fumant, l'acide sulfurique fumant, ainsi que el mélange de ces deux acides se comportent à son égard comme avec le composé précédent." And after stating, in the description of the preceding compound, that it is not attacked in the cold by bromine, fuming nitric acid, sulphuric acid at the maximum of concentration with nitric acid, nor by fuming sulphuric acid, they state: "Le mélange des acides azotique et sulfurique agit sur le carbure lorsque'on maintient ces corps pendant quelque temps en ébullition." That this observation does not represent correctly the behavior of this distillate from Pennsylvania, nor Ohio, nor Canadian petroleum, has been clearly shown by experiments described in this paper. It is especially inapplicable to the Canadian distillate, since this soil with a mixture of ordinary concentrated nitric and sulphuric acids, on shaking, immediately develops sufficient heat to raise the temperature to vigorous ebullition of the acid mixture, and to destroy a large portion of the hydrocarbon. In all these experiments the initial reaction had to be controlled by cooling.

Concerning the number of carbon atoms in the hydrocarbon I have separated at this point, it seems to be well established by the molecular weight, $C_{21}H_{24}$, and by the composition of the monochlor derivative, $C_{12}H_{23}Cl$. Yet in a product with a specific gravity much higher than this purified hydrocarbon, Pelouze and Cahours obtained numbers by analysis, as shown above, corresponding closely to the formula $C_{13}H_{26}$, and from the hydrocarbon a chlorine derivative, $C_{13}H_{27}Cl$, also supported by analytical values closely corresponding to the theoretical composition required for this formula.

SUMMARY OF RESULTS.

1. That part of Pennsylvania petroleum which boils betgeen 150° and 220° consists chiefly of decane, boiling-point, 163°-164°; decane, boiling-point 173°-174°, probably normal decane; hendecane, boiling-point 196°-197°; and dodecane, boiling-point 214°-216°. It contains also in smaller proportions the series of aromatic hydrocarbons boiling withn these limits. Allusion has already been made to mesitylene, cumol, pseudocumol, cymol, isocymol, durol, isodurol, and no doubt others could be identified with sufficient quantities of the petroleum distillates.

(Continued on page 20.)

FOREIGN MAILS

The following table gives the date and time of closing of mails for foreign countries, at the New York postoffice. A star indicates that letters must be addressed per the steamer named for the countries indicated. A dagger indicates that registered mails close at 6 p. m. on the previous day. In the case of mails via steamers from Pacific ports, the hour of closing is daily up to the date specified.

After the closing of the Supplementary Trans-Atlantic Mails named below, additional supplementary mails are opened on the piers of the American, English, French and German steamers, and remain open until within ten minutes of the hour of sailing of steamer.

Mails for	Steamer.	Date.	Mails close at P. O. Regular.	Suppl.
Belize, Puerto Cortez and Guatemala	From N. Orleans.	Aug. 2	12 p. m.	—
Europe, via Plymouth and Bremen*	Havel	Aug. 3	7 a. m.	—
Costa Rica	From N. Orleans.	Aug. 3	12 p. m.	—
Jamaica	From Boston	Aug. 3	9 p. m.	—
Europe via Southampton*	St. Paul	Aug. 4	7 a. m.	9 a. m.
Europe via Queenstown	Majestic	Aug. 4	9 a. m.	10.30 a. m.
Belgium direct via Antwerp*	Friesland	Aug. 4	10 a. m.	—
St. Thomas, St. Croix, Leeward and Windward Islands*	Fontabelle	Aug. 4	12.30 p. m.	1 p. m.
Cuba via Havana	Orizaba	Aug. 4	1 p. m.	—
Grenada, Trinidad and Tobago	Grenada	Aug. 4	12 m.	—
Europe via Plymouth, Cherbourg and Hamburg*	Normannia	Aug. 5	7 a. m.	—
Port Antonio	From Philadel.	Aug. 5	2.30 a. m.	—
Brazil and La Plata countries*	Buffon	Aug. 5	10.30 a. m.	—
Venezuela and Curacoa*	Caracas	Aug. 5	11 a. m.	11.30 a. m.
Barbadoes and North Brazil via Para	Hubert	Aug. 5	1 p. m.	—
Newfoundland	Corean, f'm Phil.	Aug. 6	2.30 a. m.	—
France, Switzerland, Italy, Spain, Portugal, Turkey, Egypt and Br. India via Havre*	La Champagne	Aug. 7	7 a. m.	—
Europe via Queenstown	Lucania	Aug. 7	9 a. m.	10.30 a. m.
Netherlands direct via Rotterdam	Maasdam	Aug. 7	8 a. m.	—
Genoa*	Ems	Aug. 7	8 a. m.	—
Fortune Islands, Jamaica, Savanilla, and Greytown*	Alleghany	Aug. 7	10 a. m.	10.30 a. m.
Cape Hayti, Gonaives, Petit Goave, Aux Cayes and Jacmel	Kitty	Aug. 7	10 a. m.	10.30 a. m.
Campeche, Chianas, Tabasco and Yucatan*	Yucatan	Aug. 7	10.30 a. m.	—
Haiti, Cumana and Carupano*	Prins Willem II.	Aug. 7	10.30 a. m.	—
St. Pierre-Miquelon	From N. Sydney.	Aug. 7	8.30 p. m.	—
China and Japan via San Francisco	Belgic	To Aug. 8	6.30 p. m.	—
China and Japan via Tacoma	Olympic	To Aug. 8	6.30 p. m.	—
Australia (except West Australia), New Zealand, Hawaii, Fiji and Samoan Islands via San Francisco	Alameda	To Aug. 14	6.30 p. m.	—
Society Islands via San Francisco	Galilee	To Aug. 25	6.30 p. m.	—
China and Japan via Vancouver	Em. of Japan.	To Aug. 16	6.30 p. m.	—

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LINSEED CAKE

Varnish Oil a Specialty.

OIL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

Complete prices current will be found on page 35

Saturday Evening, July 31, 1897.

Vegetable Oils.

LINSEED OIL.—The market remains firm, with the recent advance fully maintained by the price of seed, which is up again this week to an extent that places it considerably above the level of its products. The Western markets are all reported very firm, with nothing offering that could be laid down here below 30c. At the same time a little oil is still obtainable here at 29c., but this only in small lots, neither State nor Western crushers being willing to enter orders for any large quantities at that figure. City crushers continue to quote 30@31c., and Western is practically on the same basis, with the exceptional offerings noted at 29c. There is a little better inquiry from the large consuming industries reported by the crushers, and in a general way the market has a better tone and a more encouraging outlook, so far as the sale of goods is concerned.

COTTONSEED.—Refined. The market continues to show unmistakable signs of great strength, and at the close all desirable lots of prime summer yellow that were previously obtainable at 25c. have been cleared up, and a good grade of prime now is not offered under 25½@26c. Even at this price a buyer of a large lot would find trouble in obtaining oil, as the stocks to select from are in small compas. The explanation is to be found in the fact that cotton oil is on a line with other similar products. For three years past there has been no profit in holding goods for an advance during the summer months. Consequently, there has been less holding of stocks by the mills for a rise in prices. The new crop is late, and it is only barely possible that Texas may have new crude on the market early in September, the other sections will be later than usual. The foreign markets are all higher, England being quoted 6d. up, at 16d. Liverpool for casks. There are export orders in the market to-day for 3,000 bbls. summer yellow at 25¼@25½c., all of which have been turned down. A transaction involving several thousand barrels of barely prime summer yellow will in all probability be closed to-day at 25c. This will relieve the market of stocks which have, in a measure, retarded the upward movement in oil. There are still some lots of crude, not of a prime quality, obtainable in the valley, for which 17½c. loose is asked. The Union Oil Company of Providence, as intimated in our last, has advanced the price for winter oils 2c. Previous to this advance considerable business was done at 30@31c. To-day bids were freely made for off summer yellow at New Orleans, but no response was made by sellers beyond saying "have none to offer." The Texas mills will hold their meeting on August 2, at Galveston, and the South Carolina mills will meet on the following day at Asheville, both of which promise to be fully attended. The market closes firm at 26c. for a choice summer yellow and 24½@25c. for an off grade yellow. Winter oils, 33@34c.; white oil, 28c., and butter, 30½@32c., as to quality. The sales reported comprise 500 bbls. prime yellow at New Orleans at 25c.; 800 bbls. do. at 25c.; 1,000 bbls. do. at 25@25¼c.; 2,500 bbls. off yellow do. at 23½@24c.; 400 bbls. off yellow here at 24½c.; 500 bbls. choice yellow at 25½c.; 600 bbls. do. at 25½c.; 1,000 bbls. prime yellow at 25c; 200 bbls. extra choice yellow at 26c.; 1,000 bbls. off yellow at 25c.; 1,000 bbls. prime yellow at 26c.; 400 bbls. winter at 32c.; 1,250 bbls. do. at 30c., previous to the advance; 1,500 bbls. choice butter at 32c.; 400 bbls. ordinary grade at 30½c.; 250 bbls. white oil at 28c.; 700 bbls. Sea Island crude at 19½c., and 1 car soap stock at ⅝c.

EXPORTS OF COTTONSEED OIL FROM NEW YORK BY COUNTRIES, IN GALLONS.

	For week ending July 30, 1897.	Since Sept. 1, 1896.	Same time last year.
Africa	....	318,994	327,995
Argentine Republic	....	21,168	56,200
Australia	1,000	37,636	94,680
Austria	43,500	1,697,359	1,350,711
Belgium	....	117,760	212,500
Brazil	3,505	583,541	522,869
British Guiana	....	61,057	70,494
British West Indies	2,268	297,742	233,022
Canary Islands	....	838	2,500
Central America	....	2,321	7,796
Chili	5,000	5,716	4,000
Cuba	23	2,459	2,282
Danish West Indies	....	4,371	3,763
Denmark	....	65,649	....
Dutch Guiana	....	1,057	....
Dutch West Indies	....	1,213	51
Ecuador	....	....	....
Egypt	....	45,000	36,750
England	15,050	834,361	428,080
France	39,050	6,237,734	3,753,950
French Guiana	....	305	....
French West Indies	....	295,356	315,174
Germany	17,500	385,758	278,150
Gibraltar, f. o.	....	229 381	10,000
Hayti	....	459	2,940
India	....	300	10
Ireland	....	....	2,500
Italy	2,500	671,259	637,963
Japan	....	....	1,250
Malta	....	....	5,000
Mexico	1,211	46,919	66,923
Netherlands	....	482,457	621,350
Newfoundland	....	31,464	....
New Zealand	....	2,187	3,645
North America	....	51	27,800
Norway and Sweden	....	51	14,150
Peru	....	1,295	....
Porto Rico	....	20	3,000
San Domingo	....	38,892	34,065
Scotland	....	115,458	21,258
Uruguay	....	121,470	113,050
U. S. Colombia	....	10,779	12,198
Venezuela	....	4,369	2,153
Totals	130,607	12,905,491	9,218,130

EXPORTS OF COTTONSEED OIL FROM NEW ORLEANS BY COUNTRIES, IN GALLONS.

	For week ending July 30, 1897.	Since Sept. 1, 1896.	Same time last year.
Austria	....	115,000	182,500
Belgium	....	160,000	244,900
Denmark	....	47,500	35,000
England	....	104,350	1,529,280
France	112,500	4,258,700	629,450
Germany	10,000	479,950	45,000
Gibraltar, f. o.	....	128,260	200,000
Italy	....	7,500	7,500
Netherlands	....	1,587,852	2,576,337
Portugal	....	....	....
Totals	122,500	6,889,052	5,549,967

EXPORTS OF COTTONSEED OIL FROM BALTIMORE BY COUNTRIES, IN GALLONS.

	For week ending July 30, 1897.	Since Sept. 1, 1896.	Same time last year.
Belgium	....	....	5,300
Brazil	....	1,022	21,877
England	....	....	32,670
France	....	15,000	....
Germany	....	4,900	84,072
Ireland	....	....	250
Netherlands	....	505,609	260,000
Scotland	....	30,800	28,375
Totals	....	557,331	439,436

EXPORTS OF COTTONSEED OIL FROM GALVESTON BY COUNTRIES, IN GALLONS.

	For week ending July 30,	Since Sept. 1, 1896.
Austria	....	242,500
Denmark	....	12,500
England	....	135,000
Germany	....	259,750
Italy	....	130,000
Mexico	....	673,009
Netherlands	....	1,954,525
Totals	....	3,417,284

Charles B. Tainter & Co.'s Circular.

New York, July 31, 1897.

We are again pleased to report another advance, and, having repeatedly advised such a possibility for the past two months, we are grateful to the commercial goddess that our predictions are verified. We are even inclined to go further in our flirtation with this fickle being, and believe that only half the natural advance has been seen. Our views are based on the settlement of tariff for four years to come, the absolute necessity of our bread crops at good prices for foreign consumption, the consequent influx of money here, and, therefore, the natural death of the idiotic idea that it is honest to pay debts at 50 per cent. discount. The only drawback to a larger export business has been the advancing freights, and, notwithstanding this, the volume of trade has been large and leaving many inquiries unsatisfied. September Chicago lard closed strong last night at $4.32½. Tallow is firm at 3⅛c. Receipts of cotton oil at this port for the

HOPKINS, DWIGHT & CO.

COTTON - -

COTTONSEED OIL

AND

Southern Produce.

Commission Merchants.

Rooms 52, 53 & 54

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Refiners of All Grades of

COTTONSEED OIL

"ECLIPSE" BUTTER OIL. "SNOWFLAKE" PRIME SUMMER WHITE

SUMMER { White C/S Oil. Yellow C/S Oil. WINTER PRESSED { White C/S Oil. Yellow C/S Oil.

SUMMER AND WINTER WHITE "MINERS'" OIL.

YELLOW AND WHITE COTTONSEED STEARINE.

CRUDE C/S OIL. "RED STAR" SOAP. SOAP STOCK.

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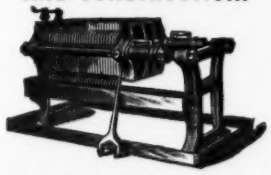

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AMERICAN COTTON OIL CO. MINERS' OIL CINCINNATI O.
THE AMERICAN COTTON OIL CO. PRIME SUMMER WHITE NEW YORK
PLANTERS NEW ORLEANS
SUN BRAND
THE AMERICAN COTTON OIL CO. EMPIRE SALAD OIL CINCINNATI
Union Oil Co. PURE SALAD OIL Providence, RI.
Y.S.C.S.P. OIL Petite Roche ARKANSAS

week, including through shipments for export, are 4,739 bbls.

Cocoanut Oils, Etc.

CEYLON.—The market has been quiet but firm throughout the week. Buyers are only taking such lots as their curent wants require at 5⅛@5¼c., as to the size of the order. Shipments are quoted at 4¾c., but buyers' views are a shade less.

COCHIN.—There have been several orders in the market for spot goods at 6½c., but as holders decline to shade 6¾c. nothing has been done. For small packages they are quoting 7c. For steamer shipment 6½c. is named, while for arrival by sailing vessels 6¾c. is asked.

CORN.—Early in the week several lots of cheap oil were picked up at 2.82½c., but with reports that nearly all of the mills in the West had shut down on account of a scarcity of coal, owing to the strike in many of the mines, prices were materially advanced. While this is given out as the reason for the advance, it is probably attributable in a large manner to the fact that the glucose manufacturers are now united and are taking advantage of their position to squeeze the shorts. Already considerable short interest has been covered, but there is still a large short interest reported for August-September, which has not yet been provided for. The firmer tone of the linseed oil market is another reason assigned for higher prices for this product. Sales are reported of three cars early in the week at 2.82½c., 1,000 bbls. later at 3.15c., 750 bbls. do. at 3.20c. The market closes firm, with limited offerings at 3.25@3.30c. for car lots, and 3.25@3.35c. for jobbing store parceds.

PALM.—Only small retail sales are reported of spot stocks at 4@4¼c. for a good red oil, and 4½@4¾c. for Lagos, as to quantity and holder.

OLIVE.—The market is a shade firmer in all positions abroad. The demand here has not as yet responded, buyers so far are only taking such lots as their current wants require at 50@51c. for a good green oil and 54@55c. for a choice yellow. It is well to consider that if the price should go above 60c. a duty will be placed upon this article. Olive foots are dull at 4¼@4½c., as to quality and holder. Shipments are quoted at 4⅛c.

RAPE.—Under cables reporting a higher market abroad, the price for shipments of a choice quality are now quoted at 60c. Other grades, however, are quoted at 57@58c., and jobbing store parcels at 61@62c.

Animal and Fish Oils.

COD.—Now that the duty of 8c. per gallon on imported oil is in force holders of Newfoundland oil are disposed to reap some benefit from the same on the oil they have on hand, and have advanced their quotations about 6c., now asking 33@35c., although some may be procurable under these figures from the holders who have more than they care to carry, as trade is very light at present. Domestic is firmer in sympathy and is now held at 26@27c.

DEGRAS. — Dealers have advanced their quotations the full ½c. of the new duty, claiming that the price before the law went into effect was but little above the cost of importation. The demand is very light. The new prices are 2¼@2⅜c. for German and 2½@3c. for English.

LARD.—The continued strength in the market for the crude material is reflected in a marked firmness in oil, which, although still quoted at 35@38c. for prime, as to make, is not offered with freedom at these figures, especially for future delivery, while some dealers decline contracts on this basis. The demand has been somewhat better, but is not active. The lower grades are dull but firm at unchanged figures.

MENHADEN.—The Menhaden Association held a meeting in this city on Wednesday last to discuss prices and consider various propositions. After discussing the situation it was decided to continue the schedule at 18@21c., as to grade, and a proposition for a large proportion of the season's probable make was rejected, though it was reported late on Friday that a sale of 12,000 bbls. had been made for export at 20c. Reports from the fishermen have been meager, but owing to the unfavorable weather little has been done in this vicinity. There has been some inquiry for crude, but no other sales are reported. Strained and bleached are quiet and unchanged.

NEATSFOOT.—There is very little demand, though during the past few days more inquiry is reported. Prices show no change.

RED.—The demand has shown no improvement, though dealers in elaine are somewhat firmer in their views, though no advance has yet been made in either elaine or saponified.

SPERM AND WHALE.—There have been no sales or receipts of crude and the situation remains unchanged. Bleached is quiet and unchanged. A lot of 5,739 gallons whale was shipped to Havre last week from this port, being a direct shipment from San Francisco.

Mineral Oils.

BLACK.—The demand for summer keeps up to the full average for this season, and prices are steady at 6@6½c. though outside lots have been on offer during the past week considerably under these figures.

CYLINDER STOCKS.—Dealers report a satisfactory movement, with the demand pretty well distributed for the various grades, though some dealers state the call to be mainly for light filtered. Prices are steady.

NEUTRAL.—There is a moderate, steady demand for jobbing parcels, buyers apparently confining their purchases to meet current requirements. Prices show no change.

PARAFFINE.—There has been no improvement in the demand, but there is a steady call for small parcels to supply current requirements, which are, apparently, light. The offerings of outside lots continue, but no large transactions are reported.

SPINDLE.—A moderate demand is reported for jobbing lots, though occasionally a large lot is being called for. Prices are unchanged.

Oil Cake, Meal, Etc.

Linseed cake is very firmly held, but business is checked by the continued scarcity of ocean freight room and the high rates prevailing in consequence of the large offerings of grain for shipment. Western cake is quoted at $20.50, with sales of meal at $21.50@22. Cottonseed cake is dull but firm, and without notable feature. We hear of no sales of corn cake.

Wax, Lard, Tallow, Etc.

PARAFFINE WAX.—While the shipments have shown no falling off, there is still an absence of new business on export account, owing to the unfavorable conditions abroad, which do not admit of shippers raising their bids. It is said that considerable lots of 124@126 m. p. wax could be secured for export at 2¼c., but bids are rarely above 2.05@2.10c., and one shipper stated his limit at 2c., which he could not exceed, but would take several car lots at that figure. The principal holders quote crude at 3¾c. for 117 m. p., and 3½c. for 124@126 m. p. We quote refined at 4½c. for 120 m. p., 4½c. for 125 m. p., 5c. for 130 m. p., and 5½c. for 135 m. p. For 140 m. p. 10@11c. is asked.

LARD.—Last Saturday's markets closed at 5@7½ points above our figures, Chicago options being quoted at 4.17½c. for September, 4.22½c. for October and 4.27½c. for December. The current week opened strong, in sympathy with the firmness in general speculative lines of provisions and breadstuffs, and while the runs of hogs continue free and the stocks of lard are so heavy as to be a burden, speculative influences have managed to gain about 10 points over last week's closing prices, and to hold the advance, with only temporary reaction. On Monday the market advanced to 4.25c. for September and 4.27½c. for October, with a gain on cash lard of about 5 points over Saturday's figures. This was lost on Tuesday and Wednesday, when heavier receipts of hogs were made the excuse for more pressure to sell by packers, and the market got down to 4.15c. for September at Wednesday's close, with a slight easing on cash lard. On Thursday, however, the market fully recovered all that had been lost and closed stiff at 4.25c. for September and 4.30c. for October, the highest figures for the week up to that point. Yesterday the market took a further upward turn in sympathy with grain and the general speculative list, and closed with a gain of 7½ points for the day, after opening at an advance of 2½ points over yesterday's close and steadily gaining through the day.

To-day the market opened at 4.32c. for September and 4.37c. for October, but advanced 5c. before the noon hour, when Chicago quotations stood: September, 4.37c.; October, 4.42c., and December, 4.47c. Cash lard is firm at 4.55c. for Western and 4.25c. for cash.

Refined lard has stiffened up as a result of the advance in raw, which has also stimulated buying to some extent on export account. We quote export packages, 4.80@5.25c.; compound, 4@4¼c. for Western and city, and neutral 5@5¼c.

TALLOW.—The market has held firm throughout the week without much actual business developing until toward the close, when there were sales of about 200 hhds. reported at 3⅛c., at which price the contract lots went in. The London sales showed an advance of 3d., and all offerings were disposed of. This further strengthened the market here by inducing more export inquiry, and 3⅛c. was freely bid, with melters' offering but sparingly at 3¼c. This is, at the moment, above the views of buyers, but the market appears to be in good shape and may be regarded as firm at the close at 3⅛@3¼c., with a chance of doing a considerable business at the split.

There have been sales of some round lots of country from current receipts, the transactions probably aggregating 350,000 lbs.

At Chicago the market is reported firm, with prime packers at 3⅝c., and No. 2, 2⅝c., while edible is quoted at 3⅝@3¾c.

STEARINE.—There has been a continued firm market for oleo stearine, with 4¾c. paid here for city, and some Western sold on a basis of 4⅝c. at Chicago, although it is said that 4½c. will now buy. The sales of oil continue of fair magnitude at Rotterdam, with prices there 36@40fl., as to brand. Grease stearine has also sold to a considerable extent at firm prices, white being quotable at 3¼c., and yellow at 3⅛c.

Lard stearine is firm, but not very active. The nominal quotation for city is 5½c.

GREASES.—The market is firm, in sympathy with lard and tallow, and there has been a moderate inquiry for the better grades. We quote city white, 2¾@3⅛c.; yellow, 2⅝c.; brown, 2@2½c.; bone and soap, 2½@2¾c. At Chicago A white is quoted at 3c., B, 2¾c.; yellow, 2¼@2⅜c.

The Price of Lard at Chicago.

The following table shows the range of prices of lard at Chicago during the past week:

July.	Cash.	Sept.	Oct.
19...	4.17½@4.20	4.22 @4.27½	4.27½@4.30
20...	4.12½@4.15	4.17½@4.22½	4.22½@4.27½
21...	4.10 @4.12½	4.12½@4.17½	4.17½@4.22½
22...	4.20 @4.22½	4.20 @4.25	4.25 @4.30
23...	4.25 @ ..	4.27½@4.32½	4.32½@4.37½

Test for Lubricating Oils.

A quasi-scientific journal gives the following test for lubricating oils, which, by the way, is not new, having been printed in these columns a dozen or more years ago, and was originated, we believe, by P. W. Mead, a former dealer in lubricating oils on Maiden lane. The test is a good one and will bear reproduction, while the results of the experiments, which are also not new, are probably not so generally known and may prove of interest:

Place single drops of different oils in line upon a piece of plate glass about 2 feet to 2 feet 6 inches long, one end being raised about 6 to 8 inches to form an inclined plane. This test should be conducted in a room where there is little or no dust. The drops of oil start from the drop of the inclined plane upon a race with each other. The first day sperm oil will be found in the rear, but after a time it will overtake the others, and be found in motion even after some others have dried up. An oil having a light body runs quickly and dries quickly, but an oil that has both a body and a free flow will readily be detected by this test. An oil may have a good body and yet tend to gum badly, which quality will also be easily detected upon the glass. A good test for the presence of acids is to put small quantities of oil in copper dishes, which are easily made by depressing bits of sheet copper with a round-faced hammer. If acid is present it will attack the copper and produce verdigris. As a result of experiments carefully made and extending over a year it was found that iron was least affected by seal oil, and most by tallow oil when it is not deacidized. Brass is not affected by rape oil, least by seal oil, and most by olive oil. Mineral lubricating oil has no action on zinc and copper, acts least on brass and most on lead. Lard oil acts least on tin and most on copper. Sperm oil acts least on brass and most on zinc. From the tables given it is found that mineral lubricating oil has, on the whole, the least action on the metals experimented with, and sperm oil the most. For the journals of heavy machinery, either rape or sperm oil, in admixture with mineral oil, is the best to use, as they have the least effect on brass and iron, which two metals generally constitute the bearing surfaces of all engines.

The Constituents of Pennsylvania, Ohio and Canadian Petroleum.

(Continued from page 17.)

2. The composition of Ohio Trenton limestone petroleum within the same limits is represented by the same members of the series CnH_{2n+2}, and the higher specific gravity of these distillates is caused by a larger proportion of aromatic hydrocarbons.

3. The constituents of Canadian corniferous limestone petroleum from Petrolia, within these limits of temperature, are the same at 163°-173°. But the hydrocarbons collecting at 196° and 214° have the composition represented by the general formula CnH_{2n}. Probably a better knowledge of these higher distillates will be gained when the true composition of American petroleum above 220° has been ascertained. The proportion of aromatic hydrocarbons is greater in Canadian than in Ohio petroleum. There are indications in all these petroleums that the heavier constituents include other bodies than the aromatic hydrocarbons, which will require for their identification the manipulation of large quantities of distillates.

GENERAL CONCLUSIONS.

The results described in this paper make it clear that no conclusions can be arrived at concerning the composition of the princpal constituents of American petroleum between 151° and 216° without separating from these bodies the various impurities with which they are contaminated in the crude distillates. However far fractional distillation may be carried, it is impossible to effect a separation of those bodies whose boiling-points do not differ by more than a few degrees. But, fortunately, the principal constituents of petroleum are not affected by reagents under conditions which allow the removal of the contaminating bodies. While the statement of Pelouze and Cahours that the portions of American petroleum under consideration are not affected by nitric acid nor by fuming sulphuric acid is not supported by the behavior of distillates used by me in this examination, it is true that the principal constituents are not acted upon by those reagents under conditions that permit of purification. A casual examination of the literature of Pennsylvania petroleum is sufficient to reveal the uncertainty and confusion in statements concerning the composition of the portions with higher boiling-points. The principal constituents have more commonly been referred to the series CnH_{2n+2}, as suggested by Pelouze and Cahours, who included in this series all the petroleum hydrocarbons, even the least volatile oils and paraffin, although on the basis of Warren's investigations allusions have been made to the unsaturated olefine hydrocarbons CnH_{2n} as constituting the main body of Pennsylvania petroleum above 150°, and the belief has been expressed that the naphtene series CnH_{2n} would best explain Warren's results. As already stated, above 150° Pelouze and Cahours separated distillates at 162°, 182°, 196°-200°, and 216°-218°, which, with no special purification, gave analytical data corresponding closely to the theoretical values for the series CnH_{2n+2}. That there are marked differences in the specific gravity of crude and refined distillates appears in the purification of all distillates described in this paper, and it is no easy task to purify the crude distillates so that they shall yield satisfactory analytical data. As the specific gravity determinations by Pelouze and Cahours in the products they analyzed are essentially different from those in Pennsylvania distillates herein presented. The percentages of carbon and hydrogen required for the series CnH_{2n+2} were obtained in fractions whose specific gravity was even higher than that of our crude distillates, which gave values closely agreeing with the series CnH_{2n}. This difference in specific gravity can only be explained by assuming, which is evidently true, that Pelouze and Cahours overlooked the aromatic hydrocarbons. It does not appear in their reference to American petroleum whether they really operated on distillates from Pennsylvania oil; but on the other hand, their specific gravity determinations are not widely different from those of distillates from Canadian oil, to which occasional reference is made in their publications.

If the results of Pelouze and Cahours were readily obtained with distillates from Canadian petroleum, as seems probable, especially since Pennsylvania distillates do not yield such high values, the specific gravity determinations in the lower distillates

agree fairly well with mine in the purified Canadian hydrocarbons.

The results of Warren, on the other hand, are consistent in giving numbers that account both in specific gravity and in percentage composition for the complex mixture that crude petroleum distillates are known to be. While Warren made no attempt to purify his distillates, they were obtained in a course of fractional separations far exceeding in efficiency those of other experimenters. It is interesting to observe how clearly the distillates from Pennsylvania petroleum analyzed by Warren resemble in specific gravity the unpurified distillates described in this paper.

Warren found no single body at 162°, his other hydrocarbons correspond in boiling-points with those described in this paper. The series CnH_{2n} of Warren, with a series of the same numerical composition in Russian oil, led to the suggestion that the naphtenes might form an essential part of Pennsylvania oil. This belief was encouraged by statements that found their way into works on petroleum, that Markownikoff discovered the naphtenes also in Pennsylvania oil. The statement that Markownikoff investigated Pennsylvania petroleum is indeed erroneous,* and a closer study shows that the naphtenes cannot be contained in Pennsylvania petroleum in any considerable quantity on account of their higher specific gravity as already shown.

Even the mixtures that the crude Pennsylvania distillates have proved to be have a much lower specific gravity than those with the same boiling-points from Russian oil. After purification, the Pennsylvania distillates unquestionably have the composition of the series CnH_{2n+2}.

Allusion has been made to the great difficulty in removing entirely the constituent with less hydrogen from the distillates prepared for analysis, and also to the fact that, even after the most thorough purification, the specific gravity of the purified distillate is appreciably higher than that of the hydrocarbon with the same boiling-point prepared by synthetic methods. These facts may indicate the presence in small quantity of naphtenes which are acted on only very slowly by re-agents, especially when largely diluted in the main body of the principal constituent.

STRUCTURE OF THE PETROLEUM HYDROCARBONS, 160°—216°.

In comparing the petroleum hydrocarbons with the corresponding bodies synthetically prepared, it is but fair to state that the literature of the latter is not altogether satisfactory. The properties of normal decane as it was prepared by Lachowicz, by the action of sodium on a mixture of normal octyl bromide and ethyl iodide, and also by Krafft, by heating caprinic acid with a mixture of hydriodic acid and phosphoric pentachloride, seem to define the corresponding petroleum hydrocarbon as the normal compound.

The boiling-point of the hydrocarbon synthetically prepared is 173° under 760 mm., and the specific gravity 0.7456 at 0°. The boiling-point assigned by me to petroleum decane is 173°.5, and its specific gravity at 20° is (from Pennsylvania petroleum) 0.7486. Evidently the decane obtained by Thorpe and Young by heating solid paraffin, boiling at 166°-168°, specific gravity 0.7394 at 13°.5, is an impure normal hydrocarbon.

A decane has been obtained by several methods, boiling at various temperatures between 157° and 162°. Active diamyl boiling at 159°-162°, specific gravity 0.7463 at 22°, with a high dextro rotatory power, was obtained by Just, on treating active amyl iodide with sodium. But the petroleum decane has not the same form, since it shows no influence on polarized light. The latter has with greater probability the same form as diisoamyl, obtained by Wurtz on heating isoamyl iodide with sodium. The boiling-point of this secondary decane is given by Wurtz as 158°, with no mention of barometric tension, and its specific gravity as 0.7413. Petroleum decane boils at 163°, and its specific gravity at 20° is 0.7479. In a similar reaction using amyl bromide, Grimshaw obtained a decane boiling at 168°, under 751 mm. Either the normal bromide must have been used in this reaction giving normal decane, or the boiling point of the product is too high.

Normal hendecane (or undecane) was pepared by Krafft from the aldehyde rautenol by the same reaction that he used for decane. Its boiling point is given as 194°.5 under 760 mm., and the specific gravity as 0.7411 at 20°. Since the boiling point, 196°-197°, and specific gravity, 0.7581, of petroleum hendecane and the formula of this body, $C_{11}H_{24}$, determined by its molecular weight, corresponded so closely to normal hendecane, it has doubtless the same form. As already explained, the higher specific gravity may be due to a small proportion of a naphtene.

The formula $C_{12}H_{26}$, which represents the petroleum hydrocarbon boiling at 214°-216°, is supported by that of normal dodecane which Krafft obtained by the reduction of laurinic acid. Normal dodecane boils at 214°.5, atmospheric pressure, and its specific gravity at 20° is 0.7511. The specific gravity of petroleum dodecane was found to be 0.7729.

RELATION BETWEEN SPECIFIC GRAVITY AND CHEMICAL COMPOSITION OF PETROLEUM DISTILLATES.

One interesting result of the examinations described in this paper, and other papers of this series, is the relation between the chemical composition of the individual hydrocarbons and the density of the crude oils from which they were prepared. Pennsylvania petroleum with the lowest specific gravity, 0.80-0.82, is composed below 220° of the hydrocarbons CnH_{2n+2}. Ohio oil, next higher in the scale of specific gravity, 0.82-0.85, still contains below 220°, as its principal constituents, hydrocarbons of the same series. As the density increases in the Canadian oil, specific gravity 0.85-0.88, the series CnH_{2n+2} represents the principal constituents up to and including decane, boiling point 173°, the higher members having the composition CnH_{2n}. Both oils with higher specific gravity, such as South American petroleum, specific gravity 0.9480, described in another paper of this series, contain only hydrocarbons of the series CnH_{2n}, and in Caucasus petroleum, specific gravity 0.88, Markownikoff and Oglobine found as the principal constituents the naphtenes, series CnH_{2n}.

ACTION OF SULPHURIC ACID ON PETROLEUM DISTILLATES.

Since the beginning of the petroleum industry, the sole method of refining has depended on agitation with sulphuric acid; yet, notwithstanding the large quantities of material that sulphuric acid removes, as shown by the immense sludge heaps in the vicinity of the refineries, the refiner has not the slightest notion as to what the acid accomplishes beyond his principal object, which is to prepare acceptable products for the market. Neither has any scientific study been made of this problem, at least in American petroleum, so far as revealed by published statements; but that this is an interesting as well as a difficult subject appears from results described in several papers of this series. That or-

(Continued on Page 32.)

*In a private communication, I am informed by Prof. Markownikoff that he has not included Pennsylvania petroleum in his investigations.

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NAVAL STORES.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures.*

Complete prices current will be found on page 35

Saturday Evening, July 31, 1897.

SPIRITS TURPENTINE.—The market for spirits is very much firmer as a result of a more active export demand, which led to an advance at the primary markets early in the week and was followed by a similar movement in prices here. This has checked business somewhat, and at the close all markets are dull. We quote regulars, 28½c. and machines, 29c.

ROSIN.—The demand for rosin became lighter about the middle of the week, and under pretty free receipts the market broke 5@10c. per barrel, closing dull but steady at the annexed prices:

Good st'd	@1.55	I	@1.90
Com'n st'd	@1.60	K	1.95@2.00
E	@1.65	M	@2.10
F	@1.75	N	@2.20
G	@1.80	W G	@2.35
H	@1.85	W W	@2.65

TAR AND PITCH.—The demand has been only moderate, but with a smaller offering in oil barrels prices for these packages have advanced. We quote tar regulars $1.75@1.80 and oil barrels $3.30@3.40. Pitch, $1.80@1.85.

Receipts and deliveries of naval stores for the week ending July 30, 1897, are reported as follows by Messrs. George L. Hammond & Co.:

	Rosin.	Sp. Turp.	Tar.
Stock in yard July 23, 1897	30,312	1,597	873
Receipts	2,004	1,874	146
Deliveries	2,963	2,238	357
Stock in yard July 30, 1897	29,353	1,233	662
Transfer	1,950	90	15

Charleston, S. C., July 30.

Turpentine firm at 25½c.; sales, none. Rosin firm; sales, none; A, B, C, D, $1.15; E, $1.20; F, $1.30; G, $1.35; H, $1.50; I, $1.55; K, $1.55; M, $1.65; N, $1.75; WG, $1.90; WW, $2.

Savannah, Ga., July 30.

Turpentine—Market opened firm at 26½c.; sales, 373; closed firm; 26¾c.; sales, 110; receipts, 1,477. Rosin firm; sales, 1,027; receipts, 5,574; quote, closing: A, B, C, D, $1.20; E, $1.25; F, $1.30; G, $1.35; H, $1.50; I, $1.55; K, $1.55; M, $1.65; N, $1.85; WG, $2.05; WW, $2.40.

Wilmington, S. C., July 30.

Spirits turpentine firm; 25@25½c. bid; receipts, 337 cks. Rosin firm; $1.20@1.25; receipts, 940 bbls. Crude turpentine firm at $1.30, $1.80 and $1.90; receipts, 81 bbls. Tar quiet at $1.15; receipts, 135 bbls.

Liverpol, July 30—3.45 P. M.

Closing: Turpentine—Spirits firm, 21s. 6d. Rosin—Common steady, 4s. 6d.

Liverpool, July 30—12.30 P. M.

(Press Report.) Turpentine—Spirits, 21s. 6d. Rosin, common, 4s. 6d.

London, July 30.

Turpentine—Spirits, 20s. 10½d. Rosin—American strained, 4s. 9d.

Messrs. James Watt & Son furnish the following London turpentine statistics:

	1897.	1896.	1895.	1894.
Stock July 10	15,848	16,905	16,487	14,912
Del'd this week	2,275	2,044	1,103	1,676
Since Jan. 1	44,079	49,328	37,488	46,173
	s. d.	s. d.	s. d.	s. d.
Price July 10	20	19	21 3	22 3
Septemb'r-Decemb'r	20	19	21 3	22 6
January-April	20 9	19 10½	22	23

Mr. Edward Flash, Jr., of the Williams & Flash Company, left with his family on Friday last for a two weeks' outing in the White Mountains.

E. A. Smythe, T. J. Martin, P. D. Wade and W. A. Blake have corporated the Moneynick Oil Mill, which will be located in Pelzer, S. C. Its capital stock will be $20,000.

WANTS.

SPECIALS OR NOTICES *in this column are at the rate of Two Dollars for each insertion—for eight lines or less. All over eight lines Twenty-five cents per line of about six words. The full amount in cash must accompany all orders.*

Those having Plumbago or any Ores or Mineral Paints they want ground or manufactured, will save money by communicating with

THE HUDSON RIVER PAINT COMPANY

NEWBURGH, N. Y.

WANTED,

Experienced paint and varnish salesman, with established trade, to travel New England States; must come well recommended, and state salary. Apply Box 12, care of this paper.

SALESMEN

Visiting the retail drug trade and desiring a profitable side line, with no sample case or bundles to carry, address "DRUG TRADE," care of this paper.

CHANGE OF POSITION

Wanted by a mechanical and chemical engineer, graduate of a university in Europe, and thoroughly experienced in the chemical business; also familiar with and experienced in electrolytic work. Address "NEMO," care of this paper.

SITUATION WANTED,

By a party well and favorably acquainted with manufacturers of leather, oil cloth and rubber. Refer for character and ability to present employers, who have sold the business represented by the undersigned. Address "B," care of this paper.

WANTED,

Superintendent of mixed paint and color department of a paint and varnish manufacturing company, located in one of the Middle States. The company's manufacturing is under the personal supervision of our general superintendent. We want to relieve him of the duties of the paint department. Applicant must be an educated, experienced, methodical man in the neighborhood of thirty years of age, and possess decided executive ability. A good position, with splendid opportunities for the future, is offered to the right man. Address, with full particulars, "EXPERIENCE," care of this paper.

NOTICE.

We mine, manufacture, buy and sell all kinds of mineral paints, dry colors, minerals and clays. ALPHA PAINT AND MINERAL CO., 338 Bourse Building, Philadelphia, Pa.

WANTED, SITUATION.

By a gentleman intimately acquainted with every wholesale druggist in the country, a position as traveling salesman in any line bought by this trade; or would accept a good inside position; was for a number of years chief buyer and salesman for a large house. Address "H. K.," care of this paper.

DEBLOOMING

Material for Mineral and Rosin Oils

P. LVENBECK & CO., Hamburg

Mr. T. M. Marc of this city left on Saturday for the mountains around Lake Champlain. He is not seeking a political office, only wants rest.

Oil prospectors who have been in Hamilton County, Ind., leasing land, propose to develop oil in the south side of the county if it exists in paying quantities. The Cudahy people, the Ohio and Indiana Pipe Line and Refining Company, the Ohio and Cumberland Company are associated, and about 6,000 acres of land have been leased in the name of the Ohio and Indiana Pipe Line Company in Fall Creek Township, Hamilton County, and in Vernon and Buck Creek townships of Hancock County.

SHEET LEAD

COLWELL LEAD CO.
63 Center St., New York
ALSO MANUFACTURERS

Chemical Lead Pipe, Lead Wire, Block Tin Worms, etc., for Chemical purposes

The Beardsley Mfg. Co.

CLEVELAND, O.

CANS,

TANKS

Let Us Hear from You.

PETROLEUM MARKET.

Saturday Noon, July 31, 1897.

The older producing fields have furnished very little of interest during the past week, where the wells, brought in and nearing the sand, are nearly all within defined territory, and even though some of them may show above the average production, they are of no special importance. Interesting reports have been received from Indiana, where several wells in new locations have been brought in showing larger productions than that State had been credited with, while developments in Kentucky and other sections show considerable work in progress and the results entirely satisfactory. From the Gaspe, Canada, region come reports of a very important strike of oil of an entirely different character to the Petrolia product, and closely resembling the amber oil of Pennsylvania. The statistical situation shows no change, the daily pipe line reports indicating a difference of about 10,000 bbls. in the average daily runs and deliveries. This would indicate an increase of about 300,000 bbls. in the stocks of Pennsylvania crude during the month of July. On the exchanges no business has been reported.

Following is given the opening, highest, lowest and closing figures for each day, in tabulated form for comparison:

	Opening.	Highest.	Lowest.	Closing.
Monday	75	75	75	75
Tuesday	75	75	75	75
Wednesday	75	75	75	75
Thursday	75	75	75	75
Friday	75	75	75	75
Saturday	75	75	73	75

Following is the range of prices of National Transit certificates during the corresponding week last year:

July 27	101½@ —
" 28	103½@ —
" 29	104½@ —
" 30	110 @ —
" 31	108½@ —
Aug. 1	108½@ —

Refined and Products.

The requirements for refined for export continue large, the engagements during the past week again exceeding 200,000 bbls., mainly for shipment in bulk, although there have been some cargoes of barreled oil engaged for early shipment to Continental ports. The price of barreled has remained steady at 5.75c. for New York loading, and 5.70c. for Philadelphia loading. Bulk is nominal at 3.25c. here and 3.20c. in Philadelphia. The principal foreign markets are steady. Quotations to-day by cable were: Antwerp, 15¾f.; Bremen, 5.15m.; London, 4¾@4⅞d.; Liverpool, 5@5⅛d. Freight rates are steady at 1s. 9d.@2s. to London, and 1s. 9d.@2s. 3d. to Continental ports, as to port and vessel. Home trade lots have been in light request, and are steady on the basis of 6c. for 150 degree water white from tanks, and 9c. for barrels.

Cases for export have been in active request, and sales of about 550,000 are reported. The price of plain tops has been steady at 6.20c. Freight rates are firm. The nominal rates for large vessels are: For Amoy, 17@18c.; Bombay, 20@21c.; Calcutta, 17@18c.; Colombo, 14½@15c.; Hong Kong, 18@19c.; Japan, 20@22c.; Java, 19@21c.; Padang, 22@23c.; Rangoon, 17@18c.; Saigon, 21@22c.; Shanghai, 23@24c.; Singapore, 16@17c.; Yokohama, 19@19½c.

Crude for export has been in light request, and only a few small sales are reported. Washing crude is quoted at 5.75c. in barrels. Cases for export have not been in request, and no sales are reported.

Prime city naphtha ruled steady at 5.50c. For export sales of 15,000 bbls. are reported.

Closing Quotations.

CRUDE.

National Transit Certificates, ₩ bbl	75 @ —
Washington crude in bbls, ₩ gal	5 75
" " bulk	3 25
Residuum, bbls for export	4¼@4½

CRUDE AT THE WELLS.

The following are prices paid by the pipe lines for crude as delivered from the wells:—

Tiona, ₩ bbl	83
Pennsylvania	73
Barnsville	63
Corning	56
New Castle	48
North Lima	48
South Lima	43
Indiana	42

REFINED—FOR EXPORT

Cargo lots for export, ₩ gal	—@ 5 75
bulk	—@ 3 25
Philadelphia loading	—@ 5 70

REFINED—JOBBING LOTS.

In barrels, pkgs. included.

140 fire test, S. W., per gal	— 7¾
130 fire test, S. W.	— @ 8
150 fire test, W. W.	— @ 9
in bulk from tanks	— @ 6
100 fire test	8 @ 8¼

REFINED IN CASES—110 FIRE TEST.

Two-five low screw, cargo lots	6 30
5,000 to 10,000	6 30
1,000 to 5,000	6 40
700 to 1,000	6 50
400 to 700	6 60
300 to 400	6 70
200 to 300	6 90
100 to 200	7 10
Under 100	7 20

NAPHTHA AND GASOLENE.

Naphtha, crude, cargo lots, 68@72 deg.	@ 5 50
Naphtha, crude, car lots, 68@72 deg.	@ 5 50
Naphtha, crude, 70 deg.	6 @ 6¼
sweet, 62 or 63 deg.	7 @ 7⅛
70 deg.	7⅛@ 7⅝
73 deg.	7¾@ 7⅞
"stove"	9¼@ 9¾
Gasolene, 86 deg.	13 @14
88 deg.	15 @16
90 deg.	18 @19

Petroleum Statistics.

RUNS—TOTAL AND AVERAGE

		Day	Total.	Av'age
Friday	July 23	145,311	2,124,415	92,366
Sat.-Sun	" 24&25	112,894	2,237,309	89,492
Mon.	" 26	124,260	2,361,569	90,829
Tues.	" 27	98,145	2,459,714	91,100
Wed.	" 28	121,133	2,580,846	92,173
Thurs.	" 29	.....	.....	.....
		1895.	1896.	1897.
January		2,410,393	2,676,196	2,670,696
February		2,031,876	2,473,288	2,637,771
March		2,454,663	2,676,264	2,911,172
April		2,564,066	2,879,608	2,789,555
May		2,529,043	2,839,612	2,852,124
June		2,447,140	2,881,414	2,939,893
July		2,643,706	2,909,382	.....
August		2,707,777	2,870,915	.....
September		2,642,995	2,772,212	.....
October		2,672,354	2,858,544	.....
November		2,613,857	2,701,688	.....
December		2,688,823	2,916,448	.....
Year		30,406,693	33,455,571	.....
Average		2,533,891	2,787,964	2,800,197

DELIVERIES—TOTAL AND AVERAGE.

		Day.	Total.	Av'age
Friday	July 23	110,500	1,881,431	81,931
Sat.-Sun.	" 24&25	149,309	2,033,740	81,349
Mon.	" 26	76,190	2,109,930	81,151
Tues.	" 27	113,345	2,223,275	82,343
Wed.	" 28	84,639	2,237,914	81,711
Thurs.	" 29	.....	.....	.....
		1895.	1896.	1897.
January		2,135,235	2,532,604	2,533,269
February		2,801,202	2,248,403	2,305,390
March		2,604,541	2,436,008	2,773,133
April		2,779,235	2,223,092	2,453,733
May		2,845,334	2,418,434	2,546,695
June		2,815,470	2,248,782	2,855,959
July		2,643,880	2,540,189	.....
August		2,423,111	2,404,005	.....
September		2,330,412	2,539,922	.....
October		2,568,204	2,594,529	.....
November		2,845,565	2,494,523	.....
December		2,401,057	2,603,638	.....
Year		32,004,214	29,284,210	.....
Average		2,667,018	2,440,351	2,528,021

CHARTERS—TOTAL AND AVERAGE.

		Day.	Total.	Av'age
Friday	July 23	94,246	1,897,421	82,487
Sat.-Sun	" 24&25	137,746	2,029,167	81,166
Mon.	" 26	89,683	2,083,852	79,571
Tues.	" 27	87,302	2,156,154	79,858
Wed.	" 28	70,635	2,226,789	79,528
Thurs.	" 29	88,730	2,315,519	79,845
		1895.	1896.	1897.
January		1,453,334	1,884,675	1,960,649
February		1,004,226	1,759,056	1,692,054
March		1,412,104	2,231,547	1,917,970
April		1,639,165	1,755,524	2,094,259
May		1,371,779	1,929,212	2,101,826
June		1,674,672	2,444,060	2,304,998
July		1,886,548	2,366,000	.....
August		2,147,501	2,440,557	.....
September		2,249,122	2,363,692	.....
October		2,499,708	2,218,573	.....
November		1,914,133	2,164,114	.....
December		1,559,042	2,103,771	.....
Year		21,211,333	25,610,781	.....
Average		1,767,611	2,134,232	2,033,741

CHARTERS FOR THE WEEK.

The total charters for refined, crude, naphtha, &c., in bulk, barrels and cases, during the week ending July 30; and from January 1, were as follows:

	Week.	Year.	1896.
Refined, bbls & bulk	203,300	6,159,500	5,569,600
Refined, cases	546,000	9,786,000	11,221,000
Crude, bbls & bulk	.....	1,360,500	1,023,300
Crude, cases	.....	218,000	68,000
Naphtha, bbls	12,500	92,400	29,900
Residuum bbls	.....	78,300	.....
Lubricating, bbls	.....	9,000	39,500
Barrels cde. eq	496,033	14,600,225	13,670,154

CLEARANCES FOR THE WEEK.

During the week ending July 30 and since January 1, the clearances of petroleum, in gallons, from the port of New York were as follows:

	Week.	Year.	1896.
Refined	10,583,690	248,769,720	272,864,07
Crude	142,000	2,432,801	767,905
Naphtha	3,101	2,928,453	2,680,389
Residuum	.....	794,726	44,200

EXPORT STATISTICS

The following table shows the total exports from the port of New York and from the United States reduced to crude equivalent, in gallons, for the week ending July 30; also total shipments to date, with comparisons with 1896:

From N. Y. for week ending July 30	14,261,587
Total from N. Y. from Jan. 1, 1897	369,372,948
Same period last year	364,618,697
Increase	4,754,251
From U. S. for week ending July 30	19,939,409
Total from U. S. from Jan. 1, 1897	648,241,178
Same period last year	612,128,767
Increase	36,112,406

TOTAL EXPORTS FROM DIFFERENT PORTS

	1897.	1896.
New York	369,372,948	364,618,697
Philadelphia	248,241,827	214,325,345
Baltimore	29,538,776	32,090,402
Boston	848,506	844,944
San Francisco	239,106	328,389
Grand total	648,241,173	612,128,767

Foreign Quotations.

REFINED.

	Antwerp.	Bremen.	London
Monday	15¾@—	5·15	4⅜@5
Tuesday	15¾@—	5·15	4⅜@5
Wednesday	15¾@—	5·15	4⅜@5
Thursday	15¾@—	5·15	4⅜@5
Friday	15¾@—	5·15	4⅜@5
Saturday	15¾@—	5·15	4⅜@5

PETROLEUM CHARTERS.

New York.

Following is a list of vessels chartered and loading or to load petroleum at New York, Philadelphia, Baltimore and Boston. Quantities refined in bbls. unless stated otherwise:

Week ending Nov 27

Br shp County of Peebles, Calcutta, 17c. cs 65,000

Week ending Dec 11

Am shp Agenor, Zanzibar, p t. cs 55,000

Week ending Dec 31

Br shp Bengalore, Java, 19¼@21¼c. cs 65,000
Br shp Palgrave Calcutta, 14½c. cs 100,000

Week ending Jan 29

Br bk Samantha, Japan, 18¾@19¾c. cs 100,000

Week ending Feb. 26.

Br bk Engelhorn, Japan, 20@21c. cs 95,000

Week ending March 5

Ger shp, Dublin, 2s. 8,100

Week ending March 12

Ger shp Camelia, Dublin, 2s. 8,000

Week ending March 26

Am shp Mary Flint, Japan, 20½@21½c. cs 135,000

Week ending April 2

Br shp Lillian L Robbins, Japan, 20½@21¼c. cs 70,000
Br bk Stella del Mare, Java, 20@21c. cs 80,000
Br bk Amazon, Calcutta, 17½c. cs 90,000

Week ending April 9

Br shp Genista, Hong Kong, 18c. cs 70,000

Week ending April 16

Br bk Dunearn, Java, 19@21c. cs 65,000

Week ending April 30

Am shp McLaurin, Shanghai, 23¾c. cs 50,000
Br shp Luzon, Shanghai, 23½c. cs 50,000
Am shp R R Thomas, Hong Kong, 18c. cs 50,000
Br shp, Shanghai, 23c. cs 75,000

Week ending May 7

Ger bk Osterbek, Shanghai, 23c. cs 60,000

Week ending May 21

Am shp E B Sutton, Japan, 20c. cs 65,000

Week ending May 28

Nor bk Adeona, Baltic, 2s 7½d. 3,500
Ger shp Johann Friederich, Stockholm, 2s 6d 8,000
Ger shp Wilhelm, Stockholm, 2s 6d. 8,500
Br shp Deccan, Shanghai, 21c. cs 80,000
Dan bk Aurorita, Denmark, 2s 6d. 3,500
Br str Queen Victoria, Shanghai, 24c. cs 65,000

Week ending June 4

Br shp Owenee, Shanghai, 24c. cs 115,000
Br str Indrani, Hong Kong, 27c. cs 180,000
Am bk, Coleraine, 2s 10½d. 3,800

Week ending June 11

Ger bk Callao, Rangoon, 17½c. cs 40,000
Dch bk Burgemeister Jonkheer Coenen, Java, 18@20c. cs 50,000

Week ending June 18

Br shp Brenhilda, Shanghai, 24c. cs 60,000
Br shp Helga, Shanghai, 24c. cs 70 00
Br shp Wm. Law, Shanghai, 24c. cs 70,000
Br shp Manchester, Shanghai, 24c. cs 125,000

Week ending June 25

It bk, Cork, 2s 6d. 5,500
Br shp Delcairnie, Shanghai, 24c. cs 75,000

Week ending July 2

Br shp Aristomene, Chittagong, 21c. cs 65,000
Br shp Maine, Calcutta, 18c. cs 60,000

Week ending July 9

Br shp Helensburg, Shanghai, 24c. cs 75,000
Br bk Inglewood, Bombay, 20c. cs 40,000
Ger shp, U. K., p t. 11,500

Week ending July 16

Br bk Austrasia, Shanghai, 24c. cs 110,000
Br bk, Calcutta, 18c. cs 100,000
Nor bk Felicitas, Zanzibar, 22c. cs 25,000
Br bk Australia, Shanghai, 24c. cs 90,000
Am shp, Japan, 21@22c. cs 90,000
Nor bk Grundloven, U K or Cont p t. 5,000
Br bk, London, 2s 1½d. 8,800
Br shp Forrest Hall, Shanghai, 21c. cs 80,000

Week ending July 23

Br bk Robert Fernie, Japan, 21¼@22½c. cs 100,000
Nor shp, Dublin, 2s 3¼d. 12,000
Nor bk, U K, 3s. 6,000
It bk Unione, U K or Cont, p t. 5,500
Br bk Sokoto, Calcutta, 18c. cs 100,000
Am shp, Japan, 21c. cs 50,000

Week ending July 30

Br bk Dundonald, Calcutta, 18c. cs 90,000
Br bk, Ipswich, 2s 3d. 1,300
It bk, Oran, 12c. cs 95,000
Br bk Mozambique, Shanghai, 24c. cs 160,000
Ger bk, U K, 2s 4½d. nap 8,000
It bk Garibaldi, Saigon, 21c. cs 50,000
Ger bk, U K, p t. 9,000
Ger bk, Blaye, 2s 9d. nap 8,500
Br bk, Rangoon, 18c. cs 60,000
It bk Anna Maria d'Abundo, U K or Cont, p t. 3,500
Br shp County of Roxburgh, Calcutta, 18c. cs 80,000
Am bk, Zanzibar, p t. cs 28,000
It bk Sirena, Rosario, 23½c. cs 13,000
Am sch, Rio de Janeiro, 21c. cs 15,000

Philadelphia.

Week ending Sept 18

Dch bk Emanuel, Dunkirk or Dieppe, 2s 6d. cde 10,000

Week ending Nov 13

It bk Andrea Lo Vico, Lisbon, 3s 4½d. 5,500

Week ending Dec 25

Br bk Ross-shire, Japan, 19½@20½c. cs 85,000

Week ending Dec 31

Br shp Peterborough, Japan, 19½@21½c cs 90,000

Week ending Jan 29

Nor str Stella, Marseilles, 3s 9d. cde 6,500

Week ending March 5

Br shp Castle Rock, Japan, 20@21c. cs 75,000

Week ending March 19

Br shp Mistley Hall, Japan, 21@22c. cs 80,000

Week ending March 26

Ger shp Gertrud, Japan, 21@22c. cs 70,000

Week ending April 2

Ger shp Erik Rickmers, Japan, 21@22c. cs 70,000

Week ending April 16

Br shp John Cooke, Nagasaki, 21@22c. cs 75,000

Week ending April 24

Ger shp Barmbek, Japan, 21c. cs 80,000

Week ending May 14

Ger bk Pisagua, Japan, 21@22c. cs 110,000

Week ending May 28

Ger shp Helene, Stockholm, 2s 6d. 8,000

Week ending June 11

Nor bk Parnasse, Gijon, bulk. cde 4,900

Week ending June 18

It bk Alfredo, Ireland, 2s 9d. 5,000

Week ending June 25

It bk Vermont, St. Louis du Rhone 2s 3d. cde 6,000
It bk Jamaica, Naples, 2s 10½d. 4,400

Week ending July 2

Fr bk Marguerite Elise, Dunkirk, 2s. cde 9,000
It bk America, Sicily, 12½c. cs 25,000

Week ending July 9

Br shp Marpesia, Liverpool, 2s 4½d. nap 8,500

Week ending July 16

Fr bk Ornevilly, France, bulk. cde 20,000
Br bk Samantha, Japan, p t. cs 80,000
It bk Mariannina, Lisbon, 13½c & 2s 9d. cs 11,000 & 1,250

Week ending July 23

It bk Maria, Marseilles, p t. cde 3,000
Swed bk Barunga, Baltic, 2s 4½d. 6,500
It bk Sant Anna, St Louis du Rhone, 2s 9d. cde 4,000
Br shp Euphemia, Marseilles, 2s 9d. cde 8,500

Week ending July 30

It bk Leon Palcaldo, Sicily, 13c. cs 25,000
Br bk Sir Robert Fernie, Japan, 21½c. cs 80,000

PETROLEUM CLEARANCES.

Following are the clearances of petroleum from the ports of New York, Philadelphia, Baltimore, Boston and San Francisco on the dates named. Refined, unless otherwise specified:

New York.

July 20.

Br str Condor, Talcahuano, 5,605 cs
Br str Condor, Valparaiso, 11,305 cs ref and 20 cs gas
Br str Condor, Callao, 1,200 cs
Br str Condor, Mollendo, 400 cs
Br str Condor, Punta Arenas, 350 cs
Am str Advance, Colon, 78 cs
Br str Michigan, London, 60 bbls

July 21.

Br str Thuringia, Hayti, 809 cs and 3 bbls
Port str Vega, Lisbon, 50 cs and 10 bbls nap
Port str Vega, Fayal, 65 cs

July 23.

Am sh Great Admiral, Rio de Janeiro, 35,000 cs
Dan str Christine Uddervalla, 875,000 gls blk
Ger sh Zion, Dublin, 8,414 bbls and 20 cs
Br str Hotham Newton, Ant, 1,170,000 gls blk
Br str Altai, Kingston, 5 cs gas and 1,001 cs and 11 bbls ref
Br str Altai, Greytown, 40 cs
Br sh Celeste Burrill, Melbourne, 185 cs ben and 11,950 cs ref
Ger str Salerno, Pernambuco, 20 bbls
Ger str Salerno, Rio Janeiro, 4,000 cs
Br str Portia, St Johns, 2 bbls ben and 340 bbls and 25 cs ref

July 24.

Am str Philadelphia, Maracaibo, 237 cs
Am str Philadelphia, Curacoa, 411 cs
Am str Philadelphia, Coro, 50 cs
Am str Philadelphia, La Guayra, 1,800 cs
Am str Philadelphia, Porto Cabello, 450 cs
Dtch str Ocean, Amsterdam, 1,170,000 gls blk
Am str Seneca, Havana, 200 cs
Am sh Alexander Gibson, Yokohama, 75,850 cs
Nor bk Ararat, Kolding, 2,532 bbls
Br str Dunstan, Ceara, 1,645 cs
Br str Dunstan, Iquitos, 52 cs
Br str Dunstan, Maranham, 2 bbls and 2,595 cs
Br str Dunstan, Para, 2,970 cs

July 26.
Am bk Adam W Spies, Honolulu, 10,000 cs
Am sch John Paul, Havana, 14,200 cs
Am sch Hattie P Simpson, Las Palmas, 44,000 cs
Br str Pontiac, Gibraltar, 300 cs

July 27.
Swed bk Hermes, Rio Grande do Sul, 10,199 cs
It bk Stefano Repetto, Limerick, 3,488 bbls
Dtch str Charlois, Rotterdam, 1,185,000 gls blk and 5 bbls gas oil
Dtch sh Hugo Moleuaar, Anjier, f o 70,784 cs

July 28.
Ger str Gustemunde, Flushing, f o 1,275,000 gls blk
Am bk Nellie Brett, Port Natal, 11,250 cs

July 29.
Nor bk Douglas, Mauritius, 7,600 cs
It bk Ausilio, Cagliari and Genoa, 27,000 cs
Dtch str Rotterdam, Rotterdam, 1,770,000 gls blk

Philadelphia.

July 17.
Br str Chesapeake, London, 1,785,416 gls blk

July 19.
It bg Fortunata, Bastia, 17,000 cs

July 21.
Br str Snowflake, London, 1,160,725 gls blk

July 22.
It bk Felicina Ferrari, Marseilles, 4,706 bbls cde

July 23.
Br bk Puritan, Hiogo, 94,600 cs

Baltimore.

July 17.
Br sch Sarah E Douglas, Tarpun Bay, 2 cs

Boston.

July 23.
Sch Brudenell, Cayenne, Fr G, 225 cs

July 24.
Sch Swanhilda, Windsor, N S, 10 bbls
Str Olivette, Halifax, 5 bbls

July 26.
Sch Roseneath, Shelbourne, N S, 5 bbls
Str Boston, Yarmouth, 10 bbls

July 27.
Str Yumuri, Bocas del Toro, 300 cs

July 28.
Str Pro Patria, St Pierre, 7 bbls
Sch Bartholde, Cayenne, Fr G, 435 cs

San Francisco.

June 30.
Tropic Bird, Tahiti, 233 cs
Jeanie, Herschel Island, 10 dms
Tropic Bird, Marquesas, 28 cs

July 1.
Morning Star, Micronesia, 22 cs
Sharpshooter, Caroline Islands, 30 cs

July 2.
Santiago Hilo, 290 cs

July 10.
R P Rithet, Honolulu, 125 pkgs gas

EXPORTS OF PETROLEUM.

FROM THE PORT OF NEW YORK.

Refined.

	Week ending July 30, 1897.	Jan 1 to July 30, 1897.	Jan. 1 to July 30, 1896.
Aalborg		225,503	251,450
Aarhuus		1,359,650	433,150
Acajutla		34,000	19,100
Adelaide		786,390	1,216,150
Aden		201,000	491,500
Alexandria		876,280	845,040
Algiers		947,000	215,000
Algoa Bay		144,792	211,170
Alleppy			60,000
Amoy		1,657,500	547,000
Amsterdam	1,170,000	6,790,800	10,475,000
Anjier, f. o	767,840	12,636,850	8,694,280
Antigua		39,130	29,940
Antofagasta		17,000	60,200
Antonia		40,000	110,000
Antwerp	1,170,000	11,280,000	7,717,000
Aracaju, Brazil		106,125	
Arica			54,000
Aruba		5,000	
Aspinwall			3,000
Auckland		274,450	237,510
Avonmouth		7,989,400	3,030,000
Azores	650	139,096	73,590
Bahamas		4,909	7,127
Bahia		1,139,680	970,900
Barbadoes		135,850	277,700
Barranquilla		88,450	71,840
Beira		4,000	5,100
Belfast		1,275,000	1,700,000
Belize		143,350	61,550
Bermuda		156,580	131,542
Bluefields			83,032
Bocas del Toro		1,560	10,445
Bombay		1,980,800	470,000
Bremen		15,081	12,000
Brisbane		678,271	1,020,000
Bristol			964,100
Buenos Ayres		3,164,694	4,688,080
Caleta Bueno		1,000	11,250
Cebadella		80,000	80,000
Calcutta		9,409,220	6,753,530
Callao	12,000	118,880	242,950
Campeache		2,450	2,750
Canary Islands—	440,000	1,390,740	893,880
Cape Graciaa		1,400	1,850
Cape Town		668,575	559,720
Cartagena		122,848	112,040
Carupano		41,460	30,150
Ceara	16,450	295,370	133,590
Ceiba		4,000	
Champerico			8,000
Charlottetown, P. E. I		8,500	
Chefoo		287,000	565,000
Chittagong		530,010	
Christiansand		860,000	
Ciudad Bolivar		56,090	40,930
Coleraine			205,000
Colombo		337,080	
Colon	780	254,859	284,760
Conal			45,000
Copenhagen		2,781,327	2,932,901
Corinto		13,800	21,750
Corral		40,000	
Cork		255,315	354,450
Coro	500	18,250	14,250
Cuba	1,800	4,930	10,870
Cumana		5,650	5,250
Curacoa	4,110	105,704	111,463
Dantzig			417,922
Delagoa Bay		392,326	236,800
Demerara		303,872	262,959
Desterro		123,650	248,000
Domenica		28,090	11,790
Dover f. o		11,728,432	12,336,121
Dublin	429,300	1,605,132	1,257,196
Dunbar		17,000	
Dunedin		258,720	288,000
Dutch Guiana		97,550	26,000
East London		331,554	264,845
Esbjerg		219,079	94,701
Exmouth		98,732	
Flushing f. o	1,275,000	69,225,240	61,788,592
Fredericia		491,902	
Fremantle		434,282	296,250
French Guiana		13,100	37,500
Gefle		388,824	388,950
Genoa	270,000	588,030	
Gibraltar	3,000	344,540	468,030
Gothenburg		669,670	721,100
Grand Cayman		30,000	10,004
Grenada		49,900	36,900
Greytown	400	74,370	144,900
Guadaloupe		99,180	148,751
Guanta		10,000	48,050
Guayaquil		136,602	187,000
Haiphong		370,000	516,210
Halifax		19,050	14,000
Hamburg		2,826,000	2,008,400
Harbor Breton, N. F.		2,555	
Havre			5,000
Hayti	8,240	455,431	498,095
Hernosand		411,162	410,150
Hiogo			489,430
Hodediah			940,000
Hong Kong		6,875,100	8,885,070
Honolulu	100,000	330,000	300,000
Hook of Holland			1,750,000
Hendekavall		132,600	
Hull		1,000,000	1,300,000
Ipswich		63,568	185,000
Iquique		26,000	11,500
Iquitos	520	25,470	9,650
Jaddah		800,000	294,660
Jamaica	10,171	554,674	528,556
Karlskrona		544,783	
Kjoge		263,386	
Kobe		607,210	
Kolding	128,398	128,398	
Konigsberg			171,716
Kurruchee			1,094,190
La Guayra	18,000	232,296	329,560
La Libertad		40,000	30,000
La Platte		20,000	
Laguna			200
Leghorn		283,470	
Limerick	178,768	694,380	275,000
Lisbon		7,300	353,446
Liverpool		4,757,908	6,416,166
Livingston		14,174	35,650
London	3,000	7,978,477	18,448,765
Londonderry			200,000
Lyttelton		245,660	258,500
Macelo		219,450	365,000
Madeira		17,500	66,000
Manaos		183,949	116,634
Manzanelo			2,000
Maracaibo	2,370	98,160	186,809
Maranham	26,038	293,476	190,905
Marautius	76,000	76,000	172,500
Martinique		185,000	159,350
Melbourne	114,720	3,198,912	3,496,480
Mollendo	4,000	6,600	45,000
Molucco Islands		1,009,010	968,390
Montivideo		1,687,800	2,037,500
Montserrat		2,760	5,180
Morocco		49,760	
Mossel Bay		35,160	8,000
Napier		51,360	
Nassau		52,609	70,024
Nelson		64,800	10,000
New Castle, Aust		56,380	75,500
New Castle, Eng		5,000	
Odense			66,699
Old Providence		21,102	3,333
Oporto		490,850	240,000
Oran		145,260	
Pacassamayo		2,000	3,000
Padang		489,880	230,510
Para	28,820	1,189,948	792,074
Parahyba		50,000	
Paranagua		98,750	
Payta		7,500	6,500
Pelotas			87,680
Penang		488,610	1,319,130
Pernambuco	1,000	1,175,260	1,821,540
Phillippine Is		587,000	567,260
Pimental		1,000	1,250
Pisco		7,510	15,500
Plymouth			1,499,333
Port de Bouc			201,280
Port Elizabeth		582,300	335,950
Port Limon		67,690	79,111
Port Natal	112,500	1,031,610	615,070
Portishead			313,438
Porto Alegre			40,000
Porto Cabello	4,500	231,700	251,111
Porto Rico		130,338	109,790
Pozzuoli		177,687	377,200
Progresso		3,550	6,250
Puerto Barrios		11,700	7,100
Puerto Cortez		14,183	59,840
Punta Arenas	3,500	25,000	19,500
Rangoon		383,290	1,487,810
Reunion		167,000	156,000
Rio Grande do Sul	101,990	775,870	145,500
Rio Janeiro	89,000	3,958,740	2,749,589
Rosario		20,401	1,372,906
Rotterdam	2,955,250	21,202,946	22,799,756
Saigon		1,380,870	996,800
Salaverry		5,000	7,500
San Andras		2,000	
San Domingo		594,944	225,592
San Fernando		8,000	
San Jose			47,300
San Paulo		154,500	
Santa Martha		2,350	

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Santos			2,074,360	2,199,000
Savanilla			184,066	91,062
Savona				1,223,553
Shanghai			26,644,330	18,004,610
Sierra Leone				10,600
Singapore			200,100	
Sligo, Ireland			267,247	180,148
Soderteije			188,214	222,450
South Shields				1,275,000
St. Andrews				290
St. Bartholomews			1,000	
St. Croix			23,138	24,463
St. Johns, N. F.		17,460	158,720	199,371
St. Kitts			153,210	53,131
St. Louis du Rhone				971,232
St. Lucia			48,266	22,000
St. Martha				4,000
St. Martins			7,352	7,490
St Pierre, Mig			2,595	3,140
St. Thomas			12,192	18,030
St. Vincent			61,750	30,360
Stockholm			796,384	
Surinam				30,000
Sundsvall			570,129	421,450
Svendborg				253,000
Sydney			2,194,420	1,632,460
Talcahuano		56,020	1,984,970	1,755,850
Tamatave				50,000
Tampico			100,691	3,700
Tobago				100
Townsville			96,000	90,000
Tralee			147,699	169,250
Trinidad			333,136	517,110
Truxillo			8,900	8,210
Turks Island			5,128	29,731
Uddevalla		875,000	875,000	
Valparaiso		113,050	337,550	391,300
Venice				1,400,000
Vera Cruz			1,750	10,550
Victoria			140,000	120,000
Wasa, Finland			79,144	
Waterford, Ireland			240,033	234,722
Wellington			265,400	270,500
Yokohama		758,500	7,091,370	10,348,170
Zanzibar			290,250	1,488,130
Total		10,589,690	275,696,083	272,774,012
Crude.				
Algoa Bay			200	
Canary Islands			2,689	
Havana		142,000	1,174,291	797,903
Port Limon			51	
Rio Janeiro			1,046,410	
S. John, N. B.			109,120	
Vera Cru			100,000	
Total		142,000	2,432,801	797,903
Naphtha.				
Adelaide			2,630	1,700
Aden			100	
Algoa Bay				216
Bahia			285	600
Barbadoes			117	15
Belize			104	
Bermuda			1,269	11,235
Brisbane				5,000
Buenos Ayres			30,632	11,077
Canary Islands			476	
Cape Town			1,562	1,111
Cartagena			510	19
Carupano				250
Ciudad Bolivar			500	10
Corinto			20	400
Cork			219,327	
Curacoa			885	915
Demerara			20	8,000
Dunedin			5,036	2,290
East London			860	
Exmouth			75,426	
Gefle			15,000	24,950
Gothenburg			42,950	60,956
Greytown			40	50
Guayaquil				400
Hayti			23,666	50,648
Honolulu			460	350
Jamaica		50	231	20
Karikrona			24,592	
Kobe			50	
La Guayra				30
Lisbon		985	1,935	1,975
Liverpool			808,440	964,174
London			1,226,649	1,164,360
Lyttleton			960	
Manaos			882	11,700
Maranham				95
Maracaibo			38	
Melbourne		1,776	19,858	15,072
Montevideo			500	1,585
Nassau			50	
Para			993	7,370
Port Elizabeth				70
Port Limon			120	30
Port Natal			1,030	985
Portishead			251,950	294,300
Porto Cabello				190
Porto Rico			249	50
Rio Janeiro			4,095	28,132
Rosario			675	
San Domingo			1,922	1,210
San Jose				330
Santos			2,000	
Savanilla			67	83
Shanghai			50	
St. Croix			89	171
St Johns, N. F.		100	573	51
St. Thomas			10	
St. Kitts			10	
Sydney			35,435	3,374
Trinidad			140	330
Valparaiso		190	1,490	1,200
Vera Cruz			10	
Wasa, Finland			18,260	
Wellington			1,295	
Total		3,101	2,826,962	2,660,857

INDUSTRIAL SECURITIES.

General trade conditions are said to show a fair degree of improvement, though this is doubtless due to the final settlement of the tariff muddle, rather than to actually increased requirements for manufacture or consumption, as purchases had in many cases been held in abeyance pending a settlement of tariff rates, while in instances future operations were dependent upon duties to be imposed on certain goods. In the lines of trade represented by the Reporter a fair average summer business is reported, with some improvement in goods affected by the new tariff, although it is thought the consumption of a few articles will be restricted by their higher cost in consequence of increased duty. There has been a general advance in articles affected, although not in all cases to the extent of the increased duty, as the large importations of late are available to prompt purchasers at advantageous rates, and the full difference will be felt as present stocks become depleted. The labor situation shows no improvement, the strike of the coal miners being still unsettled, although the strikers have failed to induce others to join their ranks. Other important strikes are threatened, while more discontent is noticeable. Several strikes of minor importance are reported, some of which were adjusted, two in this city by conceding to the demands of the strikers. The great agricultural staples have improved in market values during the past week, and the enormous foreign demand for wheat is expected to cause a further substantial alvance in that cereal. On Thursday forty steamers were chartered at Philadelphia alone to load wheat for Continental ports. Wheat opened on Monday at 85¾c., and showed some weakness during the next two days, notwithstanding the active export demand, but the market strengthened on Thursday, and on Friday advanced to 87½c., but closed strong at 86⅞c. Corn opened at 31⅞c., and each day's trading showed slight improvement, bringing the close on Friday up to 37⅞c. Oats have varied but little, though they closed at the highest—21⅞c. Cotton has fluctuated between rather narrow limits, but has developed more strength during the past two days, selling at 7.61c. on Friday, but closed at 7.59c. for August delivery. Lard has continued well above 4c. during the past week, selling at Chicago at 4.10@4.22½c., and closed at the latter figure on Friday. The market for time money has remained easy throughout the week, the supply continuing in excess of the demand. Rates at the close were 1½@2 per cent. for 60 days, 2 per cent. for 90 days, 2½ per cent for four months, and 3 per cent. for longer periods. Money on call at the Stock Exchange has ranged from 1 to 1½ per cent., though little has been done at the higher rate, at which the market closed. Mercantile paper has been in moderate demand, but the offerings have not been large, and rates have been rather easy. Rates at the close were 3½ per cent. for 60 to 90 days' indorsements, 3¾@4 per cent. for choice single names, and 4½@5 per cent. for other grades. The shipments of gold during the past week amount to about $3,500,000, and $750,000 has been engaged for shipment next Tuesday. This is not regarded as remarkable at this time in view of the recent heavy imports in anticipation of increased duty. The price of silver has varied from day to day, but has ruled low and closed on Friday at 57⅞@58¾c. per ounce for commercial bars, and 58⅝@59¾c. for government assay bars. The low values of late are attributed to the refusal of China to buy silver. For Mexican dollars 45c. was bid. The market for sterling exchange has been quiet, and latterly somewhat easier. Rates for actual business at the close were 4.86@4.86¼ for 60 days, 4.87¼ for demand and 4.87½ for cables. The supply of grain and cotton bills for spot delivery was very light, but for delivery over balance of the year they were abundant, with few buyers, except at considerable reduction from current rates. Rates at the close were 4.85½. The Industrials were actively traded in during the past week; in fact, they enjoyed a veritable "boom," several showing substantial gains. The general list of securities dealt in on the Stock Exchange have been irregular, but for the most part heavy, and have been mainly prevented from depression by purchases on foreign account. A feature of the week's business has been the large business done in bonds, on Friday amounting to over $4,000,000, the largest day's business of the year.

Sugar stock has receded from the high figures reached last week, and the stock appeared to be at the mercy of professional traders, who made several successful raids during the week, on Tuesday forcing the price down to 135½, though there appeared quite a number also who were content to take the profits which 140 or over assured them. Since Tuesday, however, the market did not reach that point, and the close on Friday was at 138½.

The fluctuations during the week have been from 135½@143¼, the lowest Tuesday and the highest Monday, closing to-day at 138½ bid.

Cotton Oil stock continued to develop strength on reports by insiders that the concern was doing a profitable business, and that with lard advancing the outlook was very flattering. The improvement was partly due to the better market conditions, the stock advancing steadily since Tuesday, and closed on Friday at 17.

The fluctuations during the week have been from 14⅛@17½, the lowest Tuesday and the highest Thursday, closing to-day at 16½ bid.

Lead stock was unfavorably affected by various reports of the effect of the advance in pig lead, and although there was considerable buying on the part of insiders the close on Friday was at 34½, although that was a gain over the previous day's close.

The fluctuations during the week have been from 33¾@35⅞, the lowest Tuesday and the highest Monday, closing to-day at 33½ bid.

Whisky stock showed considerable strength, due to the recent action of Judge Taft discharging the receivers. This action disposed of claims amounting to over $600,000, and the company is thus left free from these obligations and has had returned to it $100,000 in cash which has been waiting for action by the courts. In addition, the receiver will turn over to the company $500,000 in property which has been held by him. The stock closed on Friday at 13¾. The depression on Tuesday is attributed to operations of insiders, who hoped to buy at favorable figures, knowing that when the above facts became public the stock would advance.

The fluctuations during the week have been from 12¼@14, the lowest Tuesday and the highest Friday, closing to-day at 13¾ bid.

Linseed Oil stock has gained in strength daily, due to reports of good business, and the impression that the company would be benefited by the tariff. The stock sold on Monday at 15⅝, and closed on Friday at 16.

Rubber stock was dull on Monday at 11, but when reports were received the next two days of a consolidation with the principal competitor, the stock advanced to 15½. Later the consolidation was denied, but various reports left the impression that nevertheless negotiations looking to that end were in progress, and the close on Friday was at 14½.

Starch stock sold on Wednesday at 5⅝, and on Thursday at 5½@6.

Glucose Trust stock is expected to be listed on the Stock Exchange, and there is already a demand for the common, which is thought will open at about 25.

Proctor & Gamble Company has declared a semi-annual dividend of 6 per cent. on the common, payable Aug. 14. Books close from Aug. 1 to 14, inclusive.

At auction on Thursday 200 shares Standard Paint Company of West Virginia sold at 53.

In the following table are given the closing quotations Friday night. The market review is complete to Saturday's close:

Name	*Amount.*	*Bid*	*Asked*	*Last Sale.*
Am. Cotton Oil Co.	$20,237,100	16¾	17	
pref.	10,198,600	67½	67¾	
bonds 8% g.	3 566,000	—	—	109 July 29, '97
American Grocery Co.	1,500,000	—	—	
pref.	1,500,000	—	—	
2d pref.				
Am. Soda Fountain Co.	1,250,000	—	25	
pref.	1,250,000	55	—	
2d pref.	1,250,000	—	50	
Am Spirits Mfg. Co.	28,000,000	13¾	13⅞	
pref.	7,000,000	32½	32¾	
bonds 6%	1,400,000	—	—	79 July 23, '97
Am. Straw Board Co.	6,000,000	28	28⅛	
Am Sugar Refining Co.	36,773,000	135½	135⅝	
pref.	36,773,000	111¼	112	
Am. Tobacco Co.	17,900,000	83⅝	83¾	
pref.	11,985,000	111	112½	
Celluloid Co.	3 000,000	57	60	57 — Mch. '97
Con. Stock & Pet. Ex. Membership		—	—	$175—Feb. 24, '97
Diamond Match Co.	11,000,000	143	144	
National Lead Co.	14,905,400	34¼	34½	
pref.	14,904,000	102	102½	
National Linseed Oil Co.	18,000,000	15	16	
6% gold deb.	1,400,000	—	—	93 —Oct. 19,'94
National Starch Co.	5,000,000	5¾	6¼	
1st pref.	3,000,000	63	65	
2d pref.	2,500,000	21	30	
1st mort. 6%	3,337,000	—	—	101 July 23, '97
National Wall Paper Co.	20,000,000	—	—	
bonds 8%	3,000,000	60	80	
P. Lorillard Co.	3,000,000	—	—	
pref.	2,000,000	107	110	
Proctor & Gamble Co.	1,250,000	205	—	
pref.	2,250,000	155	—	
1st mort. bonds		112½	—	
Produce Exchange Membership		—	—	$200—July 29, '97
Quicksilver Mining Co.	5,700,000	1	2⅛	
pref.	4,300,000	7	8	
Southern Cotton Oil Co.	4,000,000	—	—	
Standard Oil Co.	97,250,000	308½	309	
United States Cordage Co.	206,000	—	—	268—Feb. 3, '97
pref.	518,700	—	—	
6% guar.	6,000,000	—	—	
1st mort.	6,076,000	—	—	24¼—Dec. 16, '96
U. S Leather Co.	60,000,000	7⅞	8	
pref.	60,000,000	64½	64⅝	
bonds 6%	9,000,000	—	—	113– July 23, '97
U. S. Playing Card Co.	2 500'000		100	
U.S. Printing Co.	3,500'000		100	
U. S. Rubber Co.	20,194,600	14¼	14½	
pref	15,686,700	68¾	69½	

Latest Patents.

586,684—CARBONIC ACID RESERVOIR. Filed April 12, 1897. Issued July 20, 1897.

586,688 — PUMP FOR ACIDS OR OTHER LIQUIDS. Filed Nov. 20, 1896. Issued July 20, 1897.

586,707—OIL WELL PUMP. Filed May 5, 1896. Issued July 20, 1897.

586,747 — BOTTLE FILLING MACHINE. Filed Oct. 7, 1896. Issued July 20, 1897.

586,783—TEST FOR MANUFACTURING LITHARGE. Filed March 10, 1897. Issued July 20, 1897.

586,854—PROCESS OF MAKING AMMONICAL CASEIN. Filed Feb. 17, 1896. Issued July 20, 1897.

586,860 — PUMPING JACK FOR WELLS. Filed Oct. 12, 1896. Issued July 20, 1897.

586,950—PROCESS FOR PURIFYING AMMONIA. Filed Aug. 15, 1896. Issued July 20, 1897.

(Special Correspondence to the Reporter.)

The Production of Asphaltum.

Washington, July 30, 1897.

The United States Geological Survey has completed its annual report upon the production of asphaltum in the United States during the past year, which is of special interest in view of the progress recently made in the development of newly discovered deposits.

"The production of asphaltum in 1896," says the report, "was limited to four States and one Territory: California, Colorado, Indian Territory, Texas, and Utah. Kentucky, which produced 5,383 short tone of bituminous sandstone in 1894, and 2,359 tons in 1895, had no product in 1896. Colorado produced a small amount of gilsonite in 1896. The output of asphaltum includes also bituminous sandstone, asphaltic limestone and liquid asphaltum, termed sometimes maltha or brea, but does not include petroleum residuum. Conditions in which the product is first sold vary. Part of the output is sold in the raw state, as mined; some is made into mastic, and some is refined. By refined asphalt is meant the hard or gum bitumen extracted from the crude rock by dissolving in benzine, after which the benzine is driven off by evaporation, leaving a residue of practically pure bitumen.

"Utah gilsonite is pure bitumen when mined. It does not require any refining process, but is included in the refined hard or gum asphaltum in these reports. As the quantities of material sold in the several conditions vary considerably each year, there is frequently a rather marked difference shown in the production and value. For instance, the product of 1895 was 68,163 short tons, valued at $348,281, whereas in 1896 it was 80,503 tons, worth $577.563, an increase of only a little more than 12,000 tons in amount, but over $200,000 in value. This comparative increase in value was due to not only an increased production of maltha or liquid asphaltum in California, but to a very pronounced advance in its price. There was also an advance in the price of crude hard asphaltum, mined in Ventura County, which added to the increased total value. In addition to this there was an increase in the amount of Colorado and Utah gilsonite reported in 1896, so that the seemingly surprising advance in value is accounted for.

"The production of asphaltum, btiuminous limestone and bituminous sandstone during 1896 was as follows: California, 74,471 tons, valued at $482,663; Texas, 2,862 short tons, valued at $35,-220; Utah and California, 3,170 tons, valued at $49,680; total, 80,503 tons, valued at $577,563.

"The total output in 1895 was 68,163 tons, valued at $348,281.

"The varieties of asphaltum may be said to be about as numerous as the localities in which they occur. Such forms as gilsonite, elaterite, uintaite, grahamite, etc., are hard and brittle at ordinary temperature, and from these they vary down to viscous, semi-fluid maltha and to a liquid form, occurring chiefly in California, which, while having asphaltum and not paraffin for a base, yields illuminating and other petroleum products. Some occur in a comparatively pure state, and others as sandstone or limestone impregnated with bitumen. These are known, respectively, as bituminous sandstone or bituminous limestone, and are classed together as bituminous rock. An interesting table is given below, in which are shown the amount and value of the different asphaltum products contained in 1896. All the varieties of refined or gum asphaltum are combined. These include 'hard,' from California, 'gilsonite,' from Colorado and Utah, and 'lithocarbon' from Texas. The values are given for the condition of the product in which it was first sold:

VARIETIES OF ASPHALTUM, ETC., PRODUCED IN 1896.

Variety.	Short tons.	Value.
Crude asphaltum	6,500	$78,000
Bituminous sandstone	56,971	170,913
Bituminous limestone	*4,300	21,500
Mastic	100	900
Hard, refined, or gum	3,122	92,240
Liquid or maltha	9,510	214,010
Totals	80,503	$577,563

*Not including mastic or refined asphaltum made from bituminous limestone.

"The imports of asphaltum into the United States include hard asphaltum from Cuba, Trinidad asphaltum from the Island of Trinidad, off the coast of Venezuela, South America, and bituminous limestone from Neufchatel and Val de Travers, in Switzerland, and Seysell in France. The following figures give the imports of crude asphaltum for the past five years: 1892, 120,-000 tons, valued at $336,000; 1893, 74,774 tons, valued at $196,000; 1894, 102,505 tons, valued at $313,000; 1895, 79,000 tons, valued at $210,000; 1896, 95,000 tons, valued at $286,000.

ASPHALT FROM PETROLEUM.

"By a modification in the final process of distilling the heavier fractions (tar) of petroleum F. H. Byerley has succeeded in obtaining as residue various grades of asphalt instead of the coke usually produced.

"The process consists in introducing a current of air through a number of pipes into the liquid, the decomposing action of the air being minimized by lowering the rate of distillation, which is prolonged to about four or five days. The temperature is first raised to 450 deg. F., and later to 650 deg. F., at which point it is maintained throughout. The distillates are divided into two portions, both of which are refined for burning oils after removal, by steaming, of the sulphur they contain (0.04 to 0.15 per cent.).

"The air appears to act mechanically by preserving the tar from coking on the walls of the still, and chemically by oxidizing sulphur and hydrogen rather than by forming oxygen compounds in the oil.

"Four chief products are formed—liquid asphalt, roofing asphalt, paving asphalt and 'byerlite' or varnish asphalt. In percentage composition they differ but little from each other, the carbon content ranging from 86.22 in the first named to 87.44 in the varnish asphalt. Sulphur is present to the extent of from 0.3 to 0.4 per cent., hydrogen between 10.90 and 9.30 per cent., and oxygen from 1.90 to 2.40 per cent.

"The varnish asphalt resembles the natural bitumen (gilsonite) and is suitable for the same industrial purposes. It softens at 230 deg. and begins to flow at 260 deg. F. In carbon bisulphide it is completely soluble, but less so (62.45 per cent.) in petroleum spirit, 75 to 110 deg., and petroleumn distillate (53.37 per cent.) 200 deg. to 250 deg.

"The production of asphaltum and its allied minerals on a commercial scale in California began in 1888. The product in that year consisted entirely of bituminous sandstone, which was used for street paving. In the following year considerable attention was paid to the refining of some of the natural product for the manufacture of varnishes, insulators and protective covering for wharf piling and timbers, wood conduits, etc. During these first two years of the asphaltum industry in California the business was somewhat overdone and a reaction set in. The conditions were not ripe for a revolution in the system of street paving, and it is for this purpose that the bituminous sandstones of California are especially adapted. Moreover, those who had engaged in the enterprise had done so without sufficient knowledge. It is now well known that asphalt pavements are serviceable and enduring only when proper attention has been given to preparation of the foundation, laying of the base and technical treatment and laying of the asphalt itself. More than this, owing to the great difference in the qualities of various asphaltums and bituminous rocks, each must be studied for itself in order to obtain the best results. Because one asphaltum, treated by the same process to which another has been subjected, does not give as satisfactory results is not necessarily a reflection on the quality of the former. It may be really better than the other. The trouble has been with the preparation. To the lack of technical knowledge in regard to the California asphaltums may be attributed the unsatisfactory result from their earlier applications and the collapse of several companies which engaged in the business. More intelligent application has corrected this error, and the superior qualities claimed for the California asphaltums have not only been demonstrated at home, but have secured for them recognition and markets abroad. The increased production in the last four years, and particularly the largely increased value in the product in 1896, are ample evidences of this fact.

"In the earlier years of the industry the consumption of California bitumens for street paving and other purposes was confined to a few of the larger cities of the State—San Francisco, Sacramento, Los Angeles, San Luis Obispo, etc. They are now being shipped to the Eastern cities and to Europe. Mr. Charles G. Yale is authority for the statement that San Francisco is not now considered a market to any extent for the liquid asphaltum produced at the Las Conchas mine and the solid asphaltum produced at La Patera mine, both in Santa Barbara county. The mining company is now filling a contract with Glasgow, Scotland, and has been shipping some material to Paris. The railroad companies encourage the industry by giving favorable freight rates.

"In regard to the bituminous sandstones of Santa Cruz and San Luis Obispo counties, Mr. J. H. Swift, vice-president of the Consolidated Bituminous Rock Company of San Francisco, reports that the former contains about 75 per cent. quartz sand, 20 per cent. bitumen and about 5 per cent. carbonate, and that the latter contains from 82 to 83 per cent. quartz sand and yields, when separated, about 18 per cent. of hard, elastic and very pure bitumen. The rock is sold in San Francisco at $4.50 per ton, and is worth $3 per ton at the mines. This material, Mr. Swift says, needs only to be treated with hot water and steam for about twenty minutes, and it is ready for spreading. It is then rolled smooth with hot rollers and becomes a hard and lasting pavement. It is not slippery and it is not affected by the extremes of warm or cold weather, to which it is subjected in the cities of the Pacific coast. Mr. Swift states that pavements of this bituminous rock have been laid in cities where the temperature reaches 105 deg. to 115 deg. F. for several weeks at a time, and after eight years of use has caused no expense in the way of repairs. It has also been in use in eight blocks at Salt Lake City for five years, where the climate is very cold in winter, the streets being covered with snow and ice for several months. No repairs have been made on this work.

"One ton of crude bituminous rock is calculated to cover 100 square feet of surface 2 inches thick. Following are analyses of the Santa Cruz and San Luis Obispo bitumens:

ANALYSIS OF CALIFORNIA BITUMINOUS ROCKS.

Constituents.	Santa Cruz. Per cent.	San Luis Obispo. Per cent.
Bitumen	20.04	16.77
Silica	74.45	82.60
Carbonate of lime	4.75	None
Water	.76	.63
Totals	100.00	100.00

"The Santa Cruz material is said to be preferred on streets where there is heavy travel, and the San Luis Obispo where there is light traffic and fast driving."

The report describes the progress made in developing bituminous deposits in Santa Barbara county, Cal., in the Rincon and Las Conchas mines, where considerable work has been done, especially in the latter mine, in which the deposit consists of a body of bituminized sand, which is believed to owe its character to petroleum derived from fissures in the miocene shales. Some prospecting has been done in the hope of striking oil wells in these deposits, but without marked success.

Kentucky is not credited with any product during 1896, but concerning Oklahoma Territory Mr. G. F. Devereaux, general manager of the Oklahoma Oil and Asphalt Company of Oklahoma City, reports large and valuable bituminous deposits in the territory which the business depression of the last few years has prevented developing. With an improvement in business conditions Mr. Devereaux hopes to be able to place the material on the market.

"Asphaltum in various forms," continues the report, "occurs in several localities in Texas, but the bituminous limestone deposits at Cline, in Uvalde County, continue to furnish all of the commercial product. The output here in 1896 was 5,000 tons of crude rock, 2,300 tons of which was sold crude, 100 tons made into mastic for paving, the remainder being refined and yielding 450 tons of gum or 'litho-carbon.'

"Not far from this deposit, and in the same county, near the town of Uvalde, is an extensive deposit of bituminous sandstone, but no attempts have been made to develop it. The deposits in Montague county, mentioned in the preceding report have not yet become producers."

Gilsonite, a very pure form of asphaltum, is mined in Unitah and Wassatch counties, Utah, and just across the line from the former in Clear Creek county, Col. Producers of gilsonite have furnished statements of their production to the survey, but they have done so with the understanding that the statements shall be maintained as confidential. As there was but one company operating in Colorado and two in Utah, the production of the two States in 1896 has been combined. In addition to the output of gilsonite Utah produces a considerable amount of asphaltic limestone, which is used in the manufacture of paving and roofing material. It is shipped principally to Chicago and other central cities. As to ozokerite, the market is still supplied by the Gallician product, and the Utah deposits are not worked. The production of asphaltum, etc., in Utah from 1891 to 1895, and in Utah and Colorado in 1896, is shown by the following figures: 1891, 1,732 tons, valued at $82,100; 1892, 2,700 tons, valued at $93,500; 1893, 32,000 tons, valued at $90,000; 1894, 1,000 tons, valued at $35,000; 1895, 700 tons, valued at $22,500; 1896, 3,170 tons, valued at $49,680.

"The asphaltum deposits of Utah show a product of absolutely homogeneous texture, with a coarsely conchoidal fracture. In mining it gives off a fine chocolate-colored dust, which is not only very penetrating to the skin and lungs, but also, when mixed with certain proportions of air, highly explosive. The explosion which took place in the mines of the Gilson Asphaltum Company in Utah in November last was due to the ignition of this explosive mixture of air and dust from a fire carelessly started by some of the workmen under ground. This fire occurred so late in the year that it did not materially affect the output for the year. Moreover, before the fire was fairly extinguished a new opening had been made, and within ten days after the fire started ore was being shipped.

"Early in 1897 a new company was formed at Provo for the purpose of mining gilsonite on property claimed to be outside of the Unitah Indian Reservation and not within previously preempted claims. The new undertaking has developed litigation, to which the Gilson Asphaltum Company and the Indian agent of the reservation, Col. J. F. Randlett, are made parties. The outcome of the litigation will be the settlement of the boundary line of the reservation, the Gilson company claiming that its claims extend to the reservation line, and mining within the reservation being prohibited."

Awards for Hospital Supplies.

Awards for supplies for the Government Hospital for Insane for the fiscal year ending June 30, 1898, have been made by the Interior Department as follows:

Bidder 1. American White Lead and Color Co.
4. Austin Nichols & Co.
7. M. W. Beveridge.
13. W. H. Butler.
15. Charles M. Childs & Co.
20. B. B. Earnshaw & Bro.
24. Z. D. Gilman.
35. Frank Hume.
40. Lansburgh Bros.
41. Lehn & Fink.
45. Mackall Bros. & Flemer.
49. Meyer Bros. Drug Co.
52. George F. Muth & Co.
54. J. P. Nawrath.
56. Niccolai Bros.
57. Offutt & Blumer.
59. Parke, Davis & Co.
64. Hugh Reilly.
68. Rudolph, West & Co.
69. Scheller & Stevens.
71. Shoemaker & Busch.
72. Pat. H. Sheehy.
73. Smith, Kline & French Co.
75. Specialty Soap Mfg. Co.
77. Standard Oil Co.
78. Jordon Stabler.
82. F. A. Tschiffely, Jr.
84. J. T. Walker Sons.
85. John Wanamaker.
90. C. A. Woolsey Paint and Color Co.

Item 40. 100 lbs. cinnamon, ground, 14½c., bidder 67.
41. 25 lbs. cloves, ground, 7¾c., do.
42. 300 lbs. ginger, ground, 26c., bidder 78.
43. 40 lbs. mace, ground, 40c., bidder 41.
45. 500 lbs. mustard, ground, 16c., bidder 41.
46. 40 lbs. nutmegs, whole, 38c., bidder 71.
47. 750 lbs. pepper, black, 12c., bidder 78.
48. 100 lbs. gelatin, 25¾c., bidder 45.
80. 300 lbs. soda, bicarbonate, 1 98-100c., bidder 4.
91. 60,000 lbs. soap, laundry, 3¼c. and 3c., bidder 4, and 6c. bidder 75.
92. 5,000 lbs. do., sand, 1 7-10c., bidder 71.
93. 150 lbs. do., castile, white 10½c., bidder 45.
94. 1,000 lbs. do., mottled, 4¼c., bidder 85.
95. 75 lbs. do., shaving, 6c., bidder 49.
96. 75 doz. do., toilet, 50c., bidder 78, and 40c. to 90c., bidder 75.
97. 25,000 lbs. do., stock, 3 35-100c., bidder 35.
103. 150 doz. baking powder, $1.08½, bidder 72.
104. 1,000 lbs. soda, sal, 77-100c., do.
105. 1,500 gals. oil, Astral, 10c., bidder 56.
107. 5,000 lbs. starch, 2¼c., bidder 20.

238. 20,000 lbs. white lead, 4 48-100c., bidder 90.
239. 200 lbs. sienna, burnt, 6 7-10c., bidder 71.
240. 100 lybs. do., raw, 6 7-10c., do.
241. 500 lbs. chrome green, dry, 4c., bidder 64.
242. 100 lbs. do., yellow, in oil, 8¼c., bidder 15.
243. 50 lbs. do., dry, 6c., bidder 1.
244. 400 lbs. red lead, dry, 5 1-10c., bidder 52.
245. 800 lbs. Venetian red, 1c., bidder 64.
246. 1,000 lbs. metallic brown, 94-100c., bidder 15.
247. 25 lbs., lampblack, 6½c., do.
248. 90 lbs. English vermilion, dry, 10c., bidder 84.
249. 50 lbs. yellow ocher, dry, 1c., bidder 13.
250. 25 lbs. ultramarine blue, dry, 5c., bidder 64.
251. 600 gals. linseed oil, raw, 33c., bidder 15.
252. 300 gals. turpentine, 32c., do.
253. 60 gals. Japan drier, 41c., bidder 64.
254. 50 lbs. shellac, orange, 19½c., bidder 49.
255. 25 lbs. glue, white, 11½c., bidder 52.
256. 125 lbs. glue, best light Irish, 12c., bidder 64.
257. 100 lbs. whiting, 7-10c., bidder 45.
258. 800 lbs. putty, 1 45-100c., bidder 90.
259. 12 paper glaziers' points, 5c., do.
260. 25 doz. brushes, medium, $3.90, bidder 52.
261. 1 doz. do. best, $18.30, bidder 68.
262. 2 doz. do., varnish, $7.40, do.
263. 6 doz. do., paint, $8, bidder 64.
264. 10 doz. fitches, ¾-inch, 52c., bidder 52.
265. 6 doz. brushes, wall, $2.60 to $5.75, bidder 64.
266. 10 doz. sash tools, $1.60, bidder 52.
267. 150 lbs. umber, burnt, 6c., do.
268. 500 gals. preservative, $1.89 and 94c., bidders 52 and 90.
269. 50 boxes window glass, 70 and 5 per cent. off list, bidder 64.
270. 400 gals. alcohol, 17½c. per proof gal., bidder 71.
271. 10 lbs. absolute, do., 80c., bidder 69.
272. 150 lbs. Calvert's carbolic acid, No. 5, 26c., bidder 82.
273. 4 lbs. do., No. 2, $1.10, bidder 24.
274. 150 lbs. Persian insect powder, 19c., bidder 69.
275. 50 lbs. flaxseed, 2½c., bidder 24.
276. 200 lbs. camphor, gum, 41c., bidder 69.
277. 100 lbs. Epsom salts, 1c., bidder 24.
278. 25 lbs. Rochelle salts, 19c., bidder 69.
279. 10 lbs. tartaric acid, 24½c., do.
280. 50 lbs. pulv. borax, 6c., bidder 24.
281. 60 lbs. precip. chalk, 4¾c., bidder 45.
282. 10 lbs. carbonate of magnesia, 14c., bidder 49.
283. 200 lbs. bromide of potash, 42½c., bidder 45.
284. 75 lbs. chlorate of potash, 9½c., bidder 71.
285. 400 ozs. sulphate of quinine, 16c., bidder 82.
286. 10 ozs. sulphate of morphia, $1.55, bidder 49.
287. 10 lbs., do., cinchona, 41c., bidder 69.
288. 25 lbs. hydrate of chloral, 42c., bidder 73.
289. 5 lbs. fluid extract ergot, 45c., bidder 49.
290. 75 lbs. do. cascara sagrada, $1.60, bidder 59.
291. 50 lbs, sarsaparilla, 32c., bidder 71.
292. 10 lbs, do. gentian, 39c., bidder 49.
293. 5 lbs. do. ginger, 52c., bidder 82.
294. 5 lbs, do. squill, 28c., bidder 49.
295. 30 ozs. pure quinine, 21½c., do.
296. 20 gals. oil, castor, cold drawn, $1, bidder 69.
297. 10 gals. oil, cottonseed, 34c., bidder 82.
298. 36 doz. oil, cod liver, $2.79, bidder 71.
299. 15 doz. Wyeth's liquid extract of malt, $2.06, bidder 45.
300. 30 cases Hunyadi water, $7 and $10, bidder 49.
301. 2,000 grams sulph. ether, 57 9-10c. per can, bidder 45.
302. 2 lbs. pulv. opium, $5.29, bidder 69.
303. 20 lbs. chloroform, commercial, 53c., do.
304. 2,000 grams do. Squibb's, 60c. per can, bidder 82.
305. 150 lbs, glycerin, pure, 13c., bidder 73.
306. 10 lbs. sulphuric acid, c. p., 10c., bidder 45.
307. 25 lbs, muriatic acid, com., 1½c., bidder 57.
308. 6 lbs. do. acid, c. p., 8½c. do.
309. 2 lbs. nitric acid, c. p., 19½c., do.
310. 5 lbs. surgeon's sponge, $1.75, bidder 71.
311. 40 lbs. bathing sponge, $2.21, bidder 54.
312. 50 lbs, paraffin, 6½c. and 5½c., bidders 71 and 77.
313. 100 lbs. liquid ammonia, 9½c., bidder 69.
314. 30 lbs. aqua rosae, 6¾c., do.
315. 20 lbs. muriate of ammonia, 7c., bidder 24.
316. 40 lbs. absorbent cotton, 17½c., do.
317. 50 lbs. surgeon's lint, 38½c., bidder 69.
318. 25 lbs. beeswax, yellow, 27c., do.
319. 5 lbs. do. white, pure, 43c., bidder 82.
320. 100 lbs. bichromate of potash, 10¼c., bidder 69.
321. 20 lbs. black oxide of manganese, 2½c., do.
322. 10 lbs. bromide of ammonia, 52c., do.
323. 25 lbs. cinnamon bark, 8½c., do.
324. 6 doz. citrate of magnesia, effervescent, $1.20, do.
325. 20,000 capsules, 5 grain, 47½c. per M, bidder 73.
326. 10 lbs. chinchona bark, red, 15c., bidder 45.
327. 5 lbs. wild cherry bark, 6c., bidder 24.
328. 5 lbs. acetic acid, 18½c., bidder 71.
329. 10 lbs. gum arabic, 60c., bidder 24.
330. 10 lbs. do. granulated, 37c., bidder 45.
331. 10 lbs. Hubbuch's pure oxide of zinc, 34c., bidder 73.
332. 20 lbs. iodide of potash, $2.30, bidder 82.
333. 2 lbs. iodine, resub., $2.75, do.
334. 5 lbs. licorice, pulv., 5c., bidder 69.
335. 50 lbs. Calabria licorice, sticks, 27c., do.
336. 5 doz. chamois skins, large, $3.25, bidder 49.
337. 20 lbs. sweet spirits niter, 34c., bidder 45.
338. 50 lbs. sulphur, washed, 3½c., bidder 71.
339. 10 lbs. senna, powdered, 10c., bidder 69.
340. 10 lbs. subnitrate of bismuth, $1.24, bidder 73.
341. 5 lbs. tannic acid, 85c., do.
342. 5 gro. camel's hair pencils, 70c., bidder 69.
343. 60 gro. pill boxes, 16½c., bidder 45.
344. 4 rms. filtering paper, white, $2.87, bidder 69.
345. 75 gro. corks, XXX, 22c., bidder 71.
346. 25 gro. vials, assorted, 75 and 3 per cent., bidder 45.
347. 2 doz. graduates, 1 oz., 90c., bidder 82.
348. 1 doz. do., 2 oz., $1, do.
349. 4 gro. medicine glasses, $2.85, bidder 7.
350. 5 gro. ointment jars, 14c., bidder 45.
351. 50,000 pills, quin., sulp., gelatine coated, 2 grain, $1.08 per M., bidder 82.
352. 5,000 do. cath., comp., 64c. per M., bidder 45.
353. 3 gro. mustard plasters, $1.72, bidder 69.
354. 5 gro. porous plasters, $4.19, do.
355. 3 rolls cantharides plasters, 38c. per yard, bidder 71.
356. 30 rolls belladonna plaster, 36c. per yard, do.
357. 75 rolls rubber adhesive plaster, 17c. per yard, do.
358. 10 rolls surgeon's silk isinglass plaster, 24½c., do.
359. 5 lbs. pepsin saccharated, 40c., bidder 69.

(Special Correspondence of the Reporter.)

Chicago Oil Market.

Chicago, July 29, 1897.

LINSEED OIL.—The firm tone in this market, to which reference was made a week ago, continues, and is, if anything, yet more pronounced. With the possible exception of one concern (which is reported to be selling, in a jobbing way only, at 27c.) Chicago crushers are holding at 28c. These figures are more than justified by the price of seed and the extremely light stocks of cake in sight. The current inquiry is wholly consumptive, and is gauged by immediate needs, but it is unusually active for the season and considerably in excess of the midsummer average, and the outlook is good for a material reduction of stocks before the mills resume operations in the fall. The reported attempt to inject a disturbing element into the New York market excites some risibility in certain trade circles here. Chicago went through a similar experience not so many weeks ago, but the "disturbing element" was eliminated by heroic treatment.

FLAXSEED.—The daily bulletins of the secretary of the Board show a slight increase in activity as regards the total movement of seed at this point. Receipts have been 3,090 bushels more than for the week preceding, while shipments have been a little more than four times as great. The latter, however, have been nearly 17,000 bushels less than the receipts, and the total movement has been light, as compared with that for the corresponding week of last year. Receipts have fallen 100,000 bushels below the total for that period, while shipments have been more than 48,000 bushels less. A summary of the week's posting on 'Change is given below, the table presenting a comparative view of the income and outgo for the respective periods named:

Week ending.	Receipts. 1897.	Receipts. 1896.	Shipments. 1897.	Shipments. 1896.
July 29	43,740	143,900	26,867	75,338
July 22	40,650	70,400	6,119	63,177

The total reduction in Northwestern stocks—89,016 bushels—reported at the beginning of the current week, while material, falls considerably below 214,726 bushels, shown by the official statements of the week before. The supply at Chicago decreased 17,431 bushels; that at Duluth, 55,343 bushels; while the reduction at Minneapolis was 17,482 bushels. Local stocks are about eight times as great as they were a year ago, and the total for the three centers named is a round half million bushels in excess of what it was on the corresponding date of 1896. The register of flaxseed at Chicago reports about the same proportion of lower grade seed in public elevators—between 10 and 11 per cent. A year ago nearly 99½ per cent. was of contract grade. The subjoined tabular statement presents a synopsis of the official bulletins issued at the points named, for the respective dates indicated. The grading can be given only for Chicago. The table:

	July 26, 1897.	July 19, 1897.	July 27, 1896.
N. 1 N. W.	537,323	536,757	.....
No. 1	293,401	311,706	114,673
Rejected	97,398	97,000	70
No grade	2,604	2,604	609
Total Chicago	930,726	948,157	115,352
Duluth	908,030	963,373	1,238,160
Minneapolis	65,508	82,990	67,230
Total N. W.	1,904,264	1,903,620	1,420,742

The inspection department reports a marked increase in arrivals over last week, which circumstance is largely attributable to tolerably free receipts from the Southwest. (The flax from that quarter is generally of good quality, most of it grading as No. 1.) Total inspections in for the past seven days foot up 117 cars, as against 81 cars a week ago, and 88 cars the week before that. As regards quality, this week's receipts make a slightly better showing, a little more than four-fifths being passed as either No. 1 Northwestern or No. 1. The following is the official classification: No. 1 Northwestern, 29 cars; No. 1, 56; rejected, 23; no grade, 9 cars. The outward movement, while only moderate, has exceeded that of the previous week by some 50 per cent. Total inspections out are reported as 33,036 bushels; last week's were 23,469 bushels, and a fortnight ago the total was 13,583. The chief withdrawal was 25,200 bushels of ordinary No. 1, which was loaded to vessel. Other inspections out were 6,228 bushels of No. 1 Northwestern, 1,028 bushels of No. 1, and 580 bushels "local."

Both cash and speculative markets have been active and strong. There has been a fairly good crushing demand for all grades of seed on track and to go to store. No. 1 Northwestern opened at 84½c., and after selling down to 83c., reacted to 84¼c., and closed at that. Ordinary No. 1 was about 1@1½c. lower, ranging from 81¾c. to 83½c., this grade opening and closing at the outside. Most of the lower grade flax received was of exceptionally good quality, the result being that there were fair sales, by sample, and at good prices. Rejected brought 76@81½c., and no grade 75@81c., the outside price for the latter, however, being obtainable only for a few remarkably choice cars. Reported sales of all varieties "on the floor" foot up some fifty or sixty cars, nearly all of which were apparently taken for actual consumption. The speculative inquiry showed no symptom of abatement until toward the close of the period under review. There were reported sales of 641,500 bushels of September delivery (263,000 bushels in a single day) and 110,000 bushels of December flax. Grain operators re-entered the market, on the buying side, and all the crop reports favored the hypothesis of a considerably diminished yield for the coming crop year. Opening at 82½c., September flax closed 83¾c., having meanwhile sold up to 84¾c. and down to 82c. The occasional breaks were evidently the result of a desire to realize by "longs," or the occasional offerings of round lots under "stop-loss" orders.

December delivery was reported sold to the extent of 110,000 bushels at 84@86¼c. The opening was at the outside, and the closing was ¼c. lower. At the time of the present writing the feeling is strong all around, and unless the unexpected should occur the outlook seems favorable to a steady, if not a higher, market.

FLAXSEED AT DULUTH.—Duluth follows Chicago very closely as regards all fluctuations in prices. The moderate inquiry in the far Northwest is sufficiently brisk to keep quotations steady. Prices for all grades closely conform to Chicago quotations. Sellers look for higher prices, and there seems to be no inherent reason why such expectations should be disappointed.

OIL CAKE.—Sales this week have been so light as to be scarcely worth recording, even if their aggregate volume were accurately known. Buyers and sellers seem to be apart. Crushers have generally withdrawn their offers, being of opinion that the nominal quotation ($17 per ton) is disproportionate to the price of seed, and that the small amount of cake in sight ought to command better figures. On the other hand, there is no urgent demand for export, and the market is quiet, while exceedingly strong. Meal is not especially active, but is firmly held. For carlots $18 is the lowest quotation heard, and a few sales are reported at or near those figures.

OLEO OIL.—Contrary to expectation the Holland market has scored an advance of two florins. At Rotterdam extra grades appreciated from 39 florins at the opening to 41 florins at the close. Dutch churners, however, bought cautiously. Medium and inferior makes were not mentioned, and total sales for the period under review are estimated at only 500 tierces, as against some 3,700 tierces the week before. Arrivals in Holland, however, were comparatively light, and stocks in first hands are reported to have increased but 350 tierces, being estimated at only 800 tierces at the beginning of the week. Exportations of oleo have been somewhat lighter, having been about 3,600 tierces, as against 4,093 tierces the week before. Neutral lard is reported quiet but firm. To-day's advices indicate a rather firm closing all along the line. The local oleo market is a trifle more active, and a shade firmer, although only an exceedingly moderate volume of business is reported.

LARD OIL.—Generally considered, the market may be said to be quotably higher and slightly firmer, chiefly in sympathy with the course of oil. While the consumptive inquiry continues moderate, and is only seasonably active, the underlying tone is fairly firm. There have been no marked fluctuations in pressers' prices, and brokers' are a little steadier. Variations in values are, however, somewhat irregular, extra extra being quoted at 33c. (one cent higher) and extra No. 1 at 29c. (two cents lower). Lower grades are nominally a trifle higher (23@25c.), but they are practically in no request. There was a rumor this week of an important sale for export, but it lacks confirmation.

LARD.—Trading for the past six days has been characterized by the same unsettled feeling which has constituted the salient feature of the market for several weeks past. Sellers' tactics have been about the same—light offerings and a waiting of some stimulation of inquiry. The result was the development of a firmer feeling, and an advance of 12½@15c. along the entire line. Later in the week there were freer offerings, with a resultant recession of 17½@20c. At the limit of the decline the general tone of the market was comparatively steady. More or less September lard was exchanged to October at 5c. difference, while December easily commanded 10c. premium over September. There was a fair shipping inquiry, some round lots being taken for export. Choice cash lots were quotably 5@7½c. under September, with loose lots (fairly active) some 27½@30c. lower. There was a moderately good inquiry for leaf lard, and the lightness of the offerings induced a comparatively firm feeling, the market being quotably steady at 5¼. The daily bulletins show receipts of lard for the week to have been 994,120 pounds, as against shipments of about 10@12½c. over last week's closing. 7,752,040 pounds September lard has ranged from $4.07½@4.25; October from $4.12½@4.27½, and December delivery from $4.17½@4.35. Closing prices on July 24, 1896 (a year ago), were as follows: September, $3.27½; October, $3.35; December, $3.42½.

TALLOW, OLEO STEARINE, ETC.—The market for all these commodities has been comparatively quiet, although there is little change in nominal quotations. Tolerably free offerings, with a restricted consumptive inquiry, have

combined to prevent any advance. Lower grades of tallow are in very light request, and are nominally quotable at 2¼@2½c., which is a shade lower. Edible grades about hold their own at 3@3½c. Oleo stearine is in fairly good demand, and remains steady at 4½c. Greases are dull, but unchanged, the market ruling quotably steady. Brown is at 2@2½c., yellow at 2¼@2⅝c., and white at 2¾@3c. Stocks are light all around, the animals (both cattle and hogs) coming in being of a poor quality. In consequence, stocks are not increasing, and there is, at present, no reason to look for any decline in market values.

Cobalt Pigments.

The element cobalt is well known on account of the fine blue color which characterizes certain of its compounds, as, for example, those which it forms with phosphoric and with silicic acid. These bodies are insoluble and of great stability. Their hue is violet-blue, and they can be used as pigments, and the most useful of them are herein described.

Of blue cobalt pigments two are known, namely, smalts, a kind of cobalt glass, very extensively employed until the discovery of artificial ultramarine, and the so-called cobalt blue (Thenard's blue), a light blue compound of cobalt and alumina, sometimes also containing phosphoric acid.

Smalts has been largely superseded by artificial ultramarine, which not only has greater body than smalts, but is much cheaper. The manufacture of smalts may be divided into three stages—the roasting of the cobalt ore, the production of the glass, and the grinding of the latter to powder. In roasting the ore, which always contains both sulphur and arsenic, it is found advantageous not to volatilize these elemnts completely, for the presence of traces of them much facilitates the elimination of impurities in the second or glass-making stage. The roasted ore is next raised to a high temperature with silicic acid and potash. The potash must be the purest obtainable, and every trace of soda must especially be absent from it. The silicic acid is added in the form of ground quartz. The pots in which the roasted ore, quartz, and potash are heated together must be free from lime. The fused glass is poured into cold water, in order to get it in small pieces, so as to facilitate the final grinding.

Smalts is a violet-blue powder, which assumes a reddish tinge in gaslight. It mixes equally well with oil or with water, but its want of body prevents it from giving a good pigment with either. On the other hand, it is absolutely proof against light and atmospheric influences, and can be mixed with any other pigment without either suffering or causing any alteration. Acids and alkalies attack smalts slowly or not at all, and this fact is most important to the analyst in detecting adulterations of smalts. For example, the addition of a dilute mineral acid at once detects any sophistication with ultramarine or copper-blue, while contamination with any form of Prussian blue is easily recognized when an alkali is applied. Long contact with concentrated hydrochloric acid, however, converts smalts into a solution of cobalt chloride and a gelatinous mass of hydrate of silica.

Cobalt blue is much used by artists, both for the beauty and purity of its color and for its permanence. Whether it contains phosphoric acid or not depends upon the manufacturer. There appears to be little doubt that a small percentage of phosphoric acid makes the color even finer than it is without any phosphorus. The following is a description of one of the best manufacturing processes: Enough sodium phosphate is added to a solution in water or cobalt nitrate to precipitate all the cobalt. Sulphate of alumina is at the same time precipitated in a separate vessel with soda. Both precipitates are well washed, dried, mixed in the proportion of one pound of the former to eight pounds of the latter, and then heated to redness for about forty minutes, until the blue color is fully developed.

Cobalt blue is greenish-blue by daylight, violet-blue by gaslight. Like smalts, it is fast to light and air and to acids and alkalies, and is miscible with all other pigments. Heated for a long time with concentrated sulphuric acid, it gives a white mass of silicic hydrate, and a violet solution, which becomes blue when diluted with water.

Latterly, a third blue cobalt compound called Coeruleum has been put upon the market. It is a compound of cobalt with oxide of tin, and is very permanent. It is prepared by precipitating a solution of sodium stannate with cobalt nitrate. The precipitate of the oxides of tin and cobalt is washed, dried, and then heated to redness, hereupon Coeruleum is formed. Another process is to precipitate a mixed solution of cobalt and tin with soda, and to treat the precipitate as above. Sodium silicate (waterglass) can also be used as a precipitant.

Next in importance to the blues comes cobalt green (Rinmann's green). This is prepared in various ways: Two parts by weight of cobalt nitrate are mixed with from three to five parts of oxide of zinc, according to the depth of color desired, and the mixture is then heated to redness in a muffle for some hours, until the color is fully developed. Cobalt sulphate can be used instead of nitrate. One pound cobalt sulphate and five pounds zinc oxide give a deep green, and one pound cobalt sulphate and ten pounds of zinc oxide give a fine bluish-green, serving as a substitute for Schweinfurt green.

Both the above processe have the disadvantage that the resulting mass is wanting in homogeneity. The following process, however, is free from that drawback: One pound cobalt chloride, two pounds cobalt nitrate and ten pounds zinc sulphate are dissolved together in water, and then precipitated with soda. The precipitate consists of a mixture of the hydrated oxides of cobalt and zinc, and is washed, dried and ignited. Sodium arsenate or phosphate may also be used as a precipitant, to give a final product of purer and intenser color, but having a bluish shade, whereas ordinary cobalt green has a yellowish tint.

Cobalt green is fast to light and weather, and does not react with other pigments. Dilute acids do not affect it, but strong ones dissolve it, forming a blue solution. Alkalies have no action upon it.

As a yellowish cobalt color, aureolin must be mentioned. It is a potassio-cobaltic nitrite with soda. The precipitate is washed and dissolved in acetic acid, and the solution is mixed with a strong solution of potassium nitrite. On standing, the color is gradually developed in a precipitate, which is finally washed and dried.—Farben Zeitung.

Latest Patents.

586,532.—TOOL FOR FORMING HEADS OF BOTTLES. Filed Aug. 29, 1896. Issued July 13, 1897.

586,551—PROCESS OF MANUFACTURING ACETANILID. Filed May 16, 1896. Issued July 20, 1897.

586,567 — PROCESS OF MAKING POLYSULFIDS. Filed Oct. 18, 1895. Issued July 20, 1897.

586,593 — FILTER-PRESS PLATE. Filed March 8, 1897. Issued July 20, 1897.

586,623—ANIMAL EXTRACT. Filed Feb. 4, 1897. Issued July 20, 1897.

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Saturday Evening, July 31, 1897.

The influence of the new tariff has not ben felt in the drug market to an appreciable extent as yet. It has caused a stronger feeling in all lines where duties have been increased, but has not resulted in any marked price changes. Most of the changes that have occurred seem to have been caused by conditions in the producing of which the tariff had no part. There is a decidedly better feeling in the market, and more business than for some time past, but few large transactions in any line have come under our notice. The improvement in trade seems to be based on the better conditions of business generally since the tariff question has ceased to be a disturbing factor, and on the more promising outlook for fall business.

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Cassia.	

Opium.

The movement has been light, but prices have ruled steady at $3.25 for case lots, at which price a small business has been done. Some holders want $3.40, and, in view of the statistical situation, the increased duty and more inquiry, expect to get this price. Powdered opium is quiet and steady.

Morphine.

There is not much demand, but a steady feeling prevails, and prices are unchanged. We continue to quote bulk at $1.60@1.80, but large buyers might do better from some holders.

Codeine.

There is little demand and prices remain nominal and unchanged.

Quinine.

There was no further change in the market for either foreign or domestic. At the revised quotations the agents of the foreign makers and the American manufacturers do not appear to be anxious to sell, but, on the other hand, consumers seem to be indifferent, and the market closes quiet. From second hands it is reported that one or two 5,000-ounce lots of favorite foreign makes have been sold within the past day or two at 19¼c. net.

At the close outside holders declined to entertain bids of less than 20c. Manufacturers' prices were unchanged.

Cinchonidia.

The market remains dull and unchanged, only occasional small jobbing sales being reported.

Miscellaneous.

ACID, CITRIC.—The market remains steady at the recent advance, but the demand is light and prices are nominal at 33@33½c., as to quantity.

ALCOHOL.—There have been no new developments in this market. Buyers take only what is necessary to cover present wants, and prices are nominal.

ACID, SALICYLIC.—The market is firmer, owing to the change in the tariff and stronger reports from the primary markets. Spot quotations have advanced to 44@45c. for amorphous and 54@55c. for crystals, and the tendency still seems to be upward. The inside prices are from second hands.

BORAX.—On Monday last the price of borax was advanced to 5¾@6¼c., owing to the increase in the tariff. The demand shows little improvement.

CASTILE SOAP.—The market is firmer, as a result of the increased duties, white being held at 9¾@10c. and mottled at 5¼@5¾c.

CASTOR OIL.—The market remains firm, but trade is rather light.

CHLORAL HYDRATE.—The higher duty has caused an advance to $1.14@1.30 for crystals, and $1.14@1.25 for crusts, as to quantity.

COCAINE.—There is a steady market, but we hear of little business.

CODLIVER OIL.—There is not much inquiry, but the steady tone of the market is maintained.

CYANIDE OF POTASH.—The market is stronger, owing to reports that foreign makers are oversold. The inside spot quotation to-day was 27c.

GLYCERINE.—The demand is moderate and of a jobbing character, but prices are firmly maintained.

GELATINE.—The market is firmer, but under a light demand prices are unchanged.

GLUCOSE.—The market continues to advance under conditions heretofore noted, closing at $1.52½ for 41-degree test and $1.57½ for 43-degree. Chicago telegrams state that the factor's price is now $1.50 for 41-degree test.

JAPAN WAX.—The market remains steady, but there is little demand at the moment.

NUX VOMICA.—Under light supplies the market rules very firm, but there is not much call for stock at present, even in a jobbing way.

QUICKSILVER.—The feeling is easier, and while 52c. remains the nominal quotation on large lots it is intimated that some sellers might be induced to shade this on an offer for a round lot.

SACCHARIN.—Some importers have announced a decline, to take effect Aug. 2. The revised prices are $8@8.75, as to quantity, for refined; $6.50@7.25 for ordinary, and $8@8.75 for neutral, less 2½ per cent. discount to wholesale buyers.

STRYCHNINE. — The feeling is steady, but there is little demand.

VANILLIN.—There has been no further change in prices. The demand is slow and quotations are somewhat nominal.

Balsams.

There is little doing in copaiba, but the market is steady. Peru is firm at the quotations, though the demand is light. Fir and tolu are quiet and unchanged.

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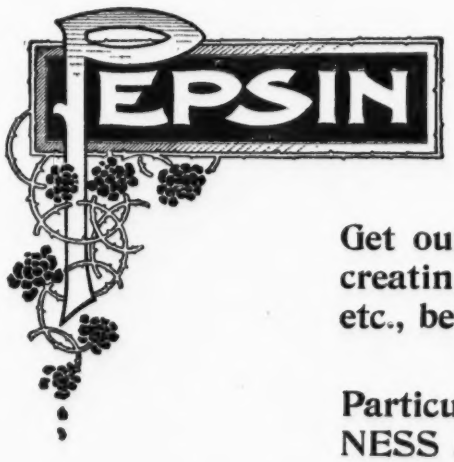

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Beans.

Only a small jobbing demand is reported for tonkas, but the steady tone of the market is maintained. Vanillas also are quiet but firm.

Essential Oils.

There has been no further change in anise or cassia, but the market is very firm, in sympathy with foreign advices. Buyers take only what is necessary to cover small current requirements, and the close was quiet. For anise $1.80 seemed to be an inside quotation; $1.85 @1.90 being demanded in some instances. Cassia is held firmly at $1.25@ 1.50, as to seller and quantity. Croton oil is still very firm, but not quotably higher. Sassafras oil has advanced, owing to scarcity and an increased inquiry. The natural oil is now held at 38c., and the artificial at 37c. In other essential oils trade was light and prices somewhat nominal.

Flowers.

American saffron is dull and lower, there being sellers at 15@16c., but no buyers of consequence. Spanish saffron is steady, though quiet. There is more inquiry for lavender flowers, and up to 6c. has been paid for selected stock, it is reported.

Gums.

Curacoa aloes are in better request and firmer, 2½c. now being quoted as inside. Only jobbing sales are reported, however. The market for chicle remains firm at the recent advance. While 30c. is the general quotation 28c. might be accepted by some holders. Buyers seem to have all they need for the present, and the market closes quiet. No further change is reported in asafoetida. Stocks are small and concentrated, and the market is very firm, but there seems to be little demand. In other gums we hear of no features of special interest, trade generally being light and prices nominal.

Herbs and Leaves.

The market remains quiet, and we find nothing of special interest to report. A steady feeling prevails, and prices are unchangeable.

Roots.

There is no movement of consequence in any line. Senega root of the 1896 crop was offered early in the week, subject to prompt reply by wire for shipment from the West, at 21c., less freight, but subsequently the offer was withdrawn, as the stock had been absorbed. Golden seal is steady, but rather nominal at 24c. Ipecac is firm but quiet. Jalap is in small stock and firmly held, but there seems to be little demand. Dandelion is scarce, and firmer at 10@12c., as to quality.

Seeds.

Canary seed is quiet, but the market is firm. Celery seed still shows an advancing tendency, owing to the increaed duty, light supplies and an active demand. Holders now demand 6½ @7c., with little obtainable at the inside price. Coriander is firmer, owing to the reported failure of the crop. Quince is firm and tending upward.

Shellac.

No fresh features have been developed. The demand shows steady improvement, but purchases are made with close reference to immediate requirements. The market is firm and unchanged.

Spices.

The market has remained quiet, Saigon roll cassia seeming to have been the only article to receive more than passing attention. Stocks are small, and prices have advanced to 40c. Cloves are easier and pepper also seems to favor the buyer.

The Glucose Combination.

While the details of the glucose combination have not been as fully made public as they will be later, when the stock is offered, the company has been organized, and will, it is said, be incorporated in New Jersey with a capital of $40,000,000 of which $26,000,000 will be common and $14,000,000 preferred stock. The controlling parties are understood to be the Sugar people, and it is reported that C. H. Matthiessen, a nephew of F. O. Matthiessen of Sugar Trust fame will be president. The people directly connected with the movement control all of the capital necessary to float the enterprise, and no prospectus has, therefore, been submitted to financial institutions here as yet. It is understood, however, that the stock will be listed as soon as the company assumes control of the various plants. As stated in the Reporter last week the concerns involved in the consolidation are the Chicago Sugar Refining Company of Chicago, American Glucose Company of Peoria, Peoria Grape Sugar Company of Peoria, Rockford Sugar Works of Rockford, Davenport Sugar Refining Company of Davenport, and the Fermenich Manufacturing Company of Marshalltown, Iowa, and their combined capacity is 101,000 bushels of corn daily. The total output of glucose in the United States is estimated at 1,240,000,000.

The options on the properties are understood to expire Aug. 15, by which time the company will probably have taken over all of the concerns named. The effect of the movement on glucose and corn oil is reported in our markets for these products.

Petroleum in the Gaspe District.

Word has reached the Department of Crown Lands at Quebec of the new rich strike of petroleum at Gaspe, and inquiries are numerous. There is increasing activity also being manifested among the miners in Galt and Baillarge Township, and the establishment of the new boat line between Quebec and Gaspe turns out to be very opportune.

Petroleum in paying quantities has been long known to exist in the Gaspe peninsula, and the "Petroleum Oil Trust" was formed several years ago to work the wells. Up to September, 1893, eight wells had been sunk, and another was being driven. A light green oil of fine quality, analogous to that of Pennsylvania, has been struck in several of the wells, in small quantity, it was true, but sufficient in volume to encourage further researches and efforts.

In the following year the Petroleum Oil Trust had continued its borings in the vicinity of Gaspe Basin, especially on the left bank of the York River, toward the line between the ranges I. and II. of Gaspe Bay South, that is in the south side of what is considered as the anticlinal of Tar Point. There were then seven wells in that section and two others were projected, the company being prepared to have a greater number in operation. Light green oil had been struck in several of the wells, and a certain number of barrels had been got out as samples; but no regular work was as yet carried on.

The mining company of Quebec commenced two wells in August, 1894, on block 41 of Galt, which were located in the south part of the anticlinal of St. Peter's Point.

During the year ending September, 1895, the Petroleum Oil Trust continued its searches in the neighborhood of Gaspe Basin, and had bored new wells, with encouraging indications. Some permits for searches had also been taken out in the vicinity; but outside of the company no work had been done. —Montreal Witness.

Latest Tariff Decisions.

Advances in Valuations.

The Treasury is advised of the following advances of merchandise of interest to the oil, paint and drug trades:

Binoxide of barium from Bessler, Waechter & Co., Newcastle on Tyne, May 12, 1897: Binoxide of barium, 88 per cent., entered at £34 15s. per ton; no advance.

Cocaine muriate from Uhlman & Co., Brunswick, April 28, 1897: Cocaine muriate, entered at 277, advanced to 290 marks per kilo. Add tins and cases.

Mirrors from Uhlman & Englemann, Fuerth, April 5, 1897: Mirrors 159; entered at 12 metres per gross; no advance. Add cases.

Ground sumac from Giovanni Ferraci, Palermo, March 26, 1897: Ground sumac, entered at 13, advanced to 14 lire per hundred kilos. Add bags.

Amsterdam Cinchona Sales.

At the last Amsterdam auctions, held July 15, 4,770 bales and 524 cases of Java cinchona bark were offered. The manufacturing portion of this supply represents 433,309 kilos weight, with an average quinine content of 5.93 per cent. The sales were very animated, and nearly the whole supply (5,154 packages) sold, with good competition, at an average unit of 4.30c. per half kilo, an advance of 0.10c. compared with the June sales. The American and English agents bought the equivalent of 4,147 kilos of sulphate of quinine; Auerbach, 4,291 kilos; Brunswick, 3,965 kilos; Manheim and Amsterdam, 7,017 kilos; Frankfort-on-Main and Stuttgart, 3,077 kilos; and various other buyers, 4,109 kilos. The prices paid for manufacturing bark ranged from 12¾c. to 42¾c. per half kilo, and the druggists' barks from 9½c. to 66¼c.

TRADE ITEMS.

The George A. Schmidt Company has been incorporated at Chicago to deal in soaps. Capital stock $5,000. Incorporators, Julian W. Mack, Philip Clarkson, Eugene Hildebrand.

The Puritan Chemical Company has been incorporated at Chicago to make proprietary articles. Capital stock, $2,500. Incorporators, Eugene C. Howe, Robert McMurdy, Fred W. Job.

The Standard Pharmacal Company has been incorporated at San Francisco, Cal., by Edward L. Baldwin, Valentine Schmidt, John H. Dawson, William M. Searby, Gaston E. Bacon, Richard E. White and John J. Mahoney, with a capital stock of $100,000.

It was discovered in the Appraiser's office last week that charcoal had been omitted from the Dingley tariff. Acting under authority given in section 8, of the administrative part of the law, Appraiser Wakeman ruled that it was dutiable at 20 per cent. ad valorem.

The Buffalo Refining Company, of which C. B. Matthews is president, has made a general assignment for the benefit of its creditors. While the company is a comparatively small corporation, being capitalized at only $15,000, still it has been famous out of proportion to its business magnitude.

A report has been sent out from Bradford, Pa., to the effct that 95 per cent. of the wood alcohol plants of the United States will shut down Aug. 1 for thirty days, and may possibly remain closed for sixty days, on account of an overproduction of wood alcohol and its products.

The Constituents of Pennsylvania, Ohio and Canadian Petroleum.

(Continued from Page 21.)

dinary concentrated sulphuric acid has some effect on the density of petroleum distillates is evident from numerous experiments described in this paper. But without independent evidence, it cannot be determined just what constitutents are affected by the acid. That some of these constituents, present in small quantity, are unstable and easily acted on by reagents is evident. The refiner must avoid an elevation of temperature during treatment with the acid, otherwise a color appears in the oil that is difficult to remove without redistillation. Evidently an increase in temperature permits of troublesome chemical changes between the acid and the oil, with the formation of products that remain in solution. The skillful refiner is also careful to remove the acid by washing before adding caustic soda to avoid an objectionable color.

In studying the action of sulphuric acid on different distillates from the Russian oil, Markownikoff and Oglobine attributed the influence of the acid mainly to its action on the unsaturated hydrocarbons and the oxygen compounds. Having separated a series of unsaturated hydrocarbons from Canadian petroleum (Mabery and Quayle, unpublished results), and having ascertained the presence of the same bodies in Ohio petroleum, on account of their unstable character and the ease with which they polymerize alone, or more readily when in combination with sulphuric acid, we are convinced that one important office of the acid is the removal of these compounds. With reference to the oxygen compounds in American petroleum, they seem to collect, for the most part at least, in the distillates above 225°. In the composition of their unpurified distillates Markownikoff and Oglobine found a considerable difference between the total percentages of carbon and hydrogen and 100 per cent., which they assigned to oxygen. In analysis of unpurified distillates described in this paper, the total percentages of carbon and hydrogen in most instances have approached 100 per cent. to within the limit of the error of analysis, although it is true that these distillates were subjected to close fractional distillation within 1°, while those of Markownikoff and Oglobine were distilled only a few times within limits of 5°. In all the distillations of Pennsylvania, Ohio and Canadian petroleum, a slight coloration of the still residue after a long series has been observed, which may be caused by a small amount of oxygen compounds.

On standing with metallic sodium, all the unpurified distillates described in this paper deposit flocculent precipitates, more or less colored, which are evidently products of decomposition. This cannot be due to the action on the principal hydrocarbon, since, when purified, such action by sodium is not observed. Neither should the aromatic hydrocarbons behave in this manner toward sodium. These precipitates must be formed from the oxygen or the nitrogen compounds in the oils, probably from the former. They cannot be due to decomposition of sulphur compounds, since Pennsylvania oil contains only a very small percentage of sulphur, and the other distillates were all treated with alcoholic mercuric chloride. It is quite probable that ordinary sulphuric acid combines to a certain extent with some of the aromatic hydrocarbons. A more extended study of the action of sulphuric acid on a larger scale as in refining, would doubtless be interesting and profitable.

The work now in progress includes a study of the pentanes, hexanes, and heptanes in Pennsylvania petroleum, and the composition of the portions of Pennsylvania, Ohio, Canadian, Berea Grit, and South American petroleum between 216° and 350°.—Am. Chemical Journal.

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Vegetable Oils.

Linseed, city, raw, in bbls	per gal.	30 @31
boiled, in bbls		32 @33
Out of town on spot		29 @31
Calcutta, raw, in bbls		— @50
Varnish oil, American		— @—
Calcutta		55 @60
Cottonseed crude, prime		21 @—
" " f.o.b. mills		17½@18
Crude, off quality		19½@—
Yellow summer, prime		25½@26
Yellow summer butter		30 @32
Yellow summer, off quality		24½@25
White summer		2½ @—
Yellow winter		33 @35
White winter		34 @34
Soap stock	per lb	½@ ⅝
Olive	per gal.	49 @54
Soap stock	per lb.	4 @ 4¼
Palm, kernel		3½@ 4
Lagos		4¼@ 4¾
Castor No. 3		9¼@ 9¾
Cocoanut, Ceylon		5½@ 5¾
Cochin		6¾@ 7
Corn		3 25@3 35
Peanut, white		47 @49
yellow		41 @42
Rosin, first run	per gal.	11½@—
Second run		13½@—
Third run		15½@—
Fourth run		16½@—
Rapeseed, in bbls., No. 1		60 @63
No. 2		55 @58
Mustard		32 @33

Animal and Fish Oils.

Black fish, crude	₩ gal.	—@—
Bleached winter		—@—
Cod, domestic, prime		26 @27
Newfoundland		33 @35
Degras, English	₩ lb	2½@ 3
French		4½@ 4¾
German		2¾@ 2⅞
Herring	₩ gal.	—@—
Lard, prime		35 @38
Extra No. 1		31 @32
No. 1		28 @29
No. 2		26 @27
Menhaden, prime crude		30 @31
Good merchantable		18 @19
Brown strained		26 @26
Light strained		26 @27
Bleached winter		29 @30
Extra bleached winter white		31 @32
Neatsfoot, white		60 @62
Extra prime		55 @57
Prime		45 @46
Extra No. 1		40 @41
Dark		27 @28
20° cold test		75 @80
30° cold test		65 @70
Red, Elaine		27 @30
Saponified	₩ lb.	3½@ 3⅝
Sea elephant, bleached winter	₩ gal.	—@—
Seal, bleached water white		—@—
Sod		30 @35
Sperm, crude		45 @—
Natural spring		—@—
Natural winter		43 @45
Bleached spring		—@—
Bleached winter		48 @50
Tallow, prime		36 @38
Dark		29 @30
Whale, natural winter		—@44
Natural spring		—@—
Bleached spring		—@—
Bleached winter		—@46
Extra bleached winter		—@48

Mineral Oils.

Black reduced, 29 gravity, 25@30 c t		6½@ 7
29 gravity, 15 cold test		7½@8
29 gravity, zero		11 @12
Summer		6 @ 6½
Cylinder, light filtered		12½@20
Dark filtered		10½@15½
Extra cold test		20½@24½
Dark steam refined		7½@12½
Natural, Franklin, 32 gravity		10 @15
Smith's Ferry, 33@34 gravity		7½@ 8½
West Virginia, 29 gravity		22 @24
Neutral filtered, lemon, 33@34 gravity		12½@18
White, 33@34 gravity		20½@22½
33@34 grav. bloomless		12½@18
32 grav. wool grade		10½@14
Paraffine, high viscosity		20 @25
25½@24 gravity		12 @13
25 gravity		11 @11½
28 gravity		8½@ 9½
30 gravity		7½@ 8
29 gravity		7½@ 8
Red paraffine No. 1		11 @11½
No. 2		—@10½
Spindle No. 1 Filtered		15 @16
No. 1		12 @13
No. 2		11 @12
No. 3		10 @11
No. 4		9½@10

Oil Cake, Meal, Etc.

Calcutta cake, city	₩ ton	— @ —
City domestic		31 00 @31 50
Western, in bags		— @30 50
Cottonseed cake at Memphis		— @14 50
at New Orleans		13 25@ 13 50
at New York		— @ —
State domestic meal	₩ ton.	— @ —
Cottonseed meal at Memphis		14 50@ —
at New Orleans		13 00@13 50
Corn Cake	₩ ton	14 00@14 50
" " meal		13 00 @14 00

Wax, Lard, Tallow, Etc.

Paraffine wax, crude	₩ lb.	3 @ 3¾
Refined 115 m. p		— @ 4¼
120 "		— @ 4¼
125 "		— @ 4½
130 "		— @ 5
135 "		— @ 5½
140 "		10 @12
Candles, paraffine, 4s, 6s, and 12s		@6½
Candles, Adamantine, 6s, 14 oz		6½@ 8
12 oz		5½@—
12s, 16 oz		8 @—
14 oz		7 @—
12 oz		— @ 6
Patent sperm, 4s. and 6s		38 @40
Sperm, 4s. and 6s		33 @34
Stearic Acid—plain ends, 4s, 6s, 8s		9 @—
patent ends, 4s & 6s		9½@—
cartons, 6lb each		9½@10
Lard, spot, tierces		4 25 @4 55
futures		4 37 @4 47
export pkgs		4 80@5 20
compound		3⅞@4¼
neutral		5 @5¾
Oleo stearine		4½@ 4¾
Lard "		5 @5½
Tallow		2¾@3⅝
Stearic Acid		7½@8

Naval Stores.

Spirits turpentine	per gal	28½@ 29
Rosin, Strained	per bbl	— @1 55
Good strained		— @1 60
E		— @1 65
F		— @1 75
G		— @1 80
H		— @1 85
I		— @1 90
K		1 95 @2 00
M		— @2 10
N		— @2 20
Window glass		— @2 30
W. W		— @2 65
Tar, regulars		— @1 70
oil barrels		3 30 @2 40
Pitch		1 80 @1 85

Paints, Varnishes, Etc.

White Lead, Zincs, Etc.

White lead, American dry	₩ lb.	4½@ 4¾
in oil		5¼@ 5¾
English in oil		8 @ 8¼
Litharge, American powdered		4½@ 5¼
English flake		6 @ 6½
Glassmakers'		5½@ 6¼
Red lead, foreign		5½@ 5½
American		5½@ 5¾
Orange mineral, American		6½@ 6¾
English		6¾@ 7¼
French		8¾@ 9
German		6½@ 6½
China white		8 @ 9
Flake white		7¾@12¾
Oremnitz white		14 @18
Zinc white, Paris, G. S., 50 bbls	8	less 4 ₩ ct
G. S., 25 bbls	8	2 ₩ ct
G. S., 10 bbls	8	1 ₩ ct
R. S., 50 bbls	6¾	4 ₩ ct
R. S., 25 bbls	6¾	1 ₩ ct
R. S., 10 bbls	6¾	1 ₩ ct
Antwerp, R. S., 50 bbls	5¾	4 ₩ ct
R. S., 25 bbls	5¾	2 ₩ ct
R. S., 10 bbls	5¾	1 ₩ ct
G. S., 50 bbls	6¾	4 ₩ ct
G. S., 25 bbls	6¾	2 ₩ ct
G. S., 10 bbls	6¾	1 ₩ ct
G S. in poppy oil		10¼@10¾
R. S. in poppy oil		9 @ 9¾
French in varnish		15 @18
American extra, dry		3½@ 4¼
In oil		5¾@ 6¼
German		6¼@ 6¼

Dry Colors.

REDS.

Carmine, No. 40	₩ lb.	2 20 @3 60
Crocus martus, imported		2¼@ 3¼
standard Am'can		1 @ 2¼
Indian red, standard American		@ 3
English		4½@ 8½
Rose pink, American		8 @ 9½
English		7½@ 9
Tuscan red, English		7 @ 10
Turkey red, English		7½@ 10
Venetian red, English, prime		1 50 @1 75
2d quality		1 00 @1 50
American		60 @ 70
Vermilion, imported English		60 @1 20
Am. quicksilver, bulk		54 @ 55
bags		55 @ 57
Chinese		70 @ 75
American		14 @ 16
Artificial		12 @ 20

BLACKS.

Carbon		3 @10
Drop, American		2½@ 4
English		5 @10
Ivory		9 @20
Lamp, commercial		3 @ 5
refined		8 @10
calcined		12 @20
fine spirit		20 @35

BLUES.

Celestial		5½@ 8
Chinese		30 @33
Prussian		29 @31
Prussian Foreign		27 @24
Refiners'		60 @70
Soluble		33 @35
Ultramarine		7 @25
Verditer		25 @30

BROWNS.

Sienna, Italian, burnt & powdered		2½@ 3½
burnt lumps	₩ lb.	1½@ 2
raw, powdered		2½@ 2¾
raw, lumps		1½@ 2
American burnt and powdered		1½@ 1½
raw		1½@ 1½
Spanish brown		1½@ 1
Umber, Turkey, burnt & powdered		3½@ 3½
burnt lumps		3½@ 4
raw and powdered		2½@ 3
raw, lumps		2½@ 2½
American, burnt		1½@ 1½
raw		1½@ 1½
Vandyke brown, German		3½@ 5½
American		1½@ 3½

GREENS.

Chrome, chemically pure		@25
extra		14@15
super		10@1
Chrome, common		5 @ 6
Paris, pure		11½@12
in pulp		—@—
Verdigris, French		16 @20

YELLOWS.

Chrome		10 @25
Ocher, Rochelle		1 10@1 20
washed Dutch		4½@ 5
French		1 @ 1¾
golden		2½@ 4
domestic	₩ ton	8 8 00@18 00

Miscellaneous.

Barytes, prime white	₩ ton.	14 00 @17 00
foreign floated		18 00 @20 00
domestic floated		15 00 @18 00
off color		10 00 @13 00
Crude, No. 1		9 00 @10 00
No. 2		8 00 @ 8 25
No. 3		7 75 @ 8 00
Blanc fixe	₩ lb	2¼@ 2¾
Bronze powder		45 @ 2 50
Brocades		45 @ 1 00
Chalk	₩ ton.	2 00 @ 2 25
Clay, China, imported	₩ ton.	10 00 @17 00
domestic		8 00 @10 00
Cobalt oxide	₩ lb.	1 60 @ —
Feldspar	₩ ton.	12 50 @16 00
Fullers Earth lump		90 @ 1 00
Powd		90 @ 1 50
Marble dust	₩ bbl.	1 25 @ 1 50
Manganese Car lots		15 00 @17 00
Jobbing		3 @ 5
Magnesite, raw		7 00 @ 8 00
ground		1½@ 1¾
Plaster		@ 1 40
dentists'		5 @ 2 00
Pumice stone, orig'al cks	₩ lb	2 @ 2½
selected lumps in bbls		5 @ 12
powdered pure, in bbls		2 @ 2½
Putty, in bulk		1 45 @ 1 75
bladders		1 65 @ 2
tins		2 @ 2½
Rottenstone, originally		6 @ 7½
Selected, lumps		5½@ 12
powdered, in bbls		3½@ 3½
Silex	per ton.	18 00 @20 00
Smalt, German blue	per lb.	15 @ 16
super black		— @ —
Talc, American	per 100 lbs.	40 @ 60
French		75 @ 1 60
Terra alba, American No. 2		45 @ 50
English		70 @ 85
French		70 @ 75
Whiting, commercial		35 @ 40
Gilders'		45 @ 50
extra gilders'		55 @ 60
American, Paris		70 @ 75
English cliffstone		90 @ 1 25

Glues.

Extra white	per lb.	15 @25
Medium white		10 @15
Cabinet		11 @15
Low grade		7 @ 9
Foot stock, white		8 @15
brown		7 @12
Irish		10½@12½
French		9 @24
German hides		13 @16
common		9 @12

Varnish Gums.

Asphaltum, Cuban prime	per lb.	4 @ 6
Egyptian		5 @ 6
Copal, Sierra Leone cleaned		50 @65
Zanzibar, bold white		50 @55
medium white		45 @50
bean and pea		28 @30
Manila, pale		17 @20
bright amber		13 @15
standard		8 @ 9
Damar, Batavia		16½@17
Singapore		12 @13
Kauri, standard		22 @
No. 2		—@14
hard scraped		26 @28
light hard scraped		35 @40
picture quality		—@50
pale and fine selected		—@40
Sandarac		—@18

Window Glass.

WINDOW GLASS.

SINGLE.

United Inches	Sizes.	Prices per Fifty feet. 1st.	2d.	3d.	4th.
25	6x 8 to 10x15	$6 50	$6 00	$5 75	$5 50
40	11x14 to 16x24	7 50	6 75	6 50	6 00
50	18x22 to 20x30	10 50	9 50	9 00	8 25
54	15x36 to 24x30	11 50	10 00	9 25	....
60	26x28 to 24x36	12 00	10 50	9 50	....
70	26x36 to 26x44	12 75	11 75	10 25	....
80	26x46 to 30x50	15 00	13 50	12 00	....
84	30x52 to 30x54	15 50	13 75	12 25	....
90	30x56 to 34x56	16 50	14 75	13 50	....
94	34x58 to 34x60	17 25	15 75	14 50	....
100	36x60 to 40x60	19 00	16 75	15 75	....

DOUBLE.

United Inches	Sizes.	Prices per Fifty feet. 1st.	2d	3d.	4th.
25	6x 8 to 10x15	$9 00	$8 00	$7 75	. ..
40	11x14 to 16x24	10 25	9 25	9 00	....
50	18x22 to 20x30	14 00	12 75	12 00	....
54	15x36 to 24x30	15 25	13 75	12 25	....
60	26x28 to 24x36	16 00	14 50	13 25	....
70	26x36 to 26x44	17 25	15 50	14 00	....
80	26x46 to 30x50	19 75	18 00	16 00	....
84	30x52 to 30x54	20 50	18 50	16 50	....
90	30x56 to 34x56	21 50	19 75	18 00	....
94	34x58 to 34x60	23 75	21 25	20 00	....
100	36x60 to 40x60	25 50	23 00	22 00	....

On the 70 in. bracket and above, French is quoted $1 higher on single and $1 50 on double. An additional 10 per cent. will be charged for all glass more than 40 inches wide. All sizes above 52 inches in length, and not making more than 81 united inches, will be charged in the 84 united inches bracket. Sizes above—$10 per box extra for every 5 inches. Discount on American 60 & 10 and French 60, 10 & 5. On and the first secondbracket of each quality, single and double, American is quoted 50c. per box higher.

Metallic Paints.

Brown	20 00	@22 00
Red	20 00	@22

Colors in Oil.

Black Japan	per lb.	18½@20
in oil		12 @13
drop		7½@10
lampblack, prime		27 @35
medium		15 @20
2d quality		13 @19
low grade		6½@10
Blue, Chinese		35 @40
Prussian		30 @40
ultramarine		12 @15
Brown, sienna, burnt		7 @10
raw		7 @10
umber, burnt		@10
raw		7 @10
Vandyke		7 @11
Green, chrome		8 @14
Paris		16 @18¼
Red, Indian		12 @15
Ventian		4½@ 8
Yellow, Chrome		13 @18
Ocher, French		4½@

Drugs.

Opium.

Opium, natural (cases)	₩ lb.	2 35 @2 40
as wanted		2 35 @2 40
powdered		3 10 @3 15

Morphine.

Morphine, bulk	₩ oz.	1 50 @1 80

Quinine.

Quinine, bulk	₩ oz.	17 @20
Cinchonidia, bulk		10 @10½
Cinchonia		— @ 6
Quinidia Alkaloid		— @ 75

Miscellaneous.

Acetanilid, in barrels	₩ lb.	30 @ 31
Acid, benzoic, true	₩ oz.	6½@ —
ex. toluol	₩ lb.	50 @ 54
boracic, crystals, city		8¾@ 9
Calif		— @ 9
powdered, city		9¼@ 9¼
Calif		8½@ 9¼
carbolic, drums		18 @ 19
bottles		25 @ —
tins		21 @ 22
citric, barrels		— @ 33
kegs		— @ 33½
pyrogallic		2 45 @ 2 60
salicylic		44 @ 45
Alcohol, 94%	₩ gal.	2 29 @ 2 33
ref. wood, 95%		— @ 65
97%		— @ 70
purified		1 20 @ 1 50
Almond oil, sweet, almonds	₩ lb.	32 @ 36
peach kernels		18 @ 28
Ambergris, black	₩ oz.	15 00 @17 50
grey, prime		27 50 @ —
fair		22 50 @ —
Ammonia, carb, domestic	₩ lb.	7¼@ 7¾
foreign		— @ 8
Antimony, Japan needle		— @ 4¾
Arrowroot, Bermuda		22 @ 23
St. Vincent, bbls		3½@ 3¾
cans		— @ 6
Barium chloride		1 80 @ 2
chlorate		31 @ 34
nitrate		— @ 6
Barbadoes tar, in bbls	₩ gal.	— @ 40
Bay rum, imported, pch		— @1 70
bbls		— @1 85
octaves		— @1 90
Beeswax, white, pure	₩ lb.	45 @ 50
yellow		27 @ 28
Bismuth, citrate		— @1 60
subcarbonate		1 25 @1 30
subgallate		1 15 @1 25
subnitrate		1 10 @1 50
Blue Pill		33 @ 34
Borax		5¼@ 5½
in bags		5 @ 5¼
powdered		5¼@ 5½
concentrated		4¾@ —
Bromine, bulk		45 @ 50
Burgundy pitch		— @ 2¼
Caffeine		5 20 @5 25
Calomel, American		66 @ 68
English		85 @ 90
Cantharides, Chinese		32½@ 33
powdered		36 @ 40
Russian		50 @ 52
powdered		— @ 55
Carnauba wax No. 1		20 @ 22
No. 2		14 @ 15
No. 3		9 @ 10
Castor oil, city, bbls		11 @ 12¼
cases		12½@ 13
Castile soap, white, pure		9½@ 10
Marseilles		6¾@ 7¼
green, pure		7½@
ordinary		6 @ 6¼
mottled, pure		5¼@ 5¾
ordinary		— @ 4
Chalk, precip		4 @ 5¾
Chloral hydrate, crusts, 28 lb. jars		— @1 80
crystals, 28 lb. 's		— @1 85
Ceresin, yellow		11 @ 12
white		12 @ 14
Chloroform		50 @ 55
Cocaine muri, bulk	₩ oz.	2 50 @2 70
oz vials		2 55 @2 75
Cocoa butter, domestic, boxes	₩ lb	35 @ 36
foreign, bulk		24½@
boxes		35 @ 36
Cod liver oil, Newfoundland	₩ gal.	60 @ 7
Norwegian	₩ bbl.	22 00 @23 00
Colocynth apples, Spanish	₩ lb.	— @ 28
Trieste		45 @ 50
Corrosive sublimate		57 @ 59
Coumarin, crude		— @12 00
refined		5 00 @ —
Cuttlefish, Trieste		— @ 2
Marseille		—

Cologne spirit	190°	gal.	$1 22½@ 1 23½
Dragon's blood, mass		lb.	18 @ 22
reeds			— @ 45
Epsom salts, per 100 lbs			90 @ 1 00
Ergot, German			13 @ —
Russian			12 @ 18
Spanish			19 @ 20
Ether, 1850			— @ 57
washed			— @ 61
1890			— @ 63
Gelatine Japanese			— @ —
Silver			— @ 30
Gold			— @ 40
Glucose 41°@43°			1 52½@ 1 57½
Glycerine, C. P. drums			12 @ 12½
C.P. bbls			12½@ 13
C.P cans			13 @ 15
Dynamite			10 @ 11
Grape sugar 70°			1 35 @ 1 40
Guarana			43 @ 45
Harlem oil, old style			2 15 @ 2 25
New style			3 00 @ 3 25
Hypophosphite, lime			1 02½@ 1 07½
potash			1 02½@ 1 07½
soda			1 02½@ 1 07½
Iceland moss			5 @ 5½
Insect powder			22 @ 28
Iodine, re-sublimed			3 00 @ 3 05
Iodoform			3 55 @ 3 60
Irish moss, ordinary			5½@ 6
bleached			— @ 10½
Isinglass, Russian, bleached			3 00 @ 3 10
unbleached			2 75 @ 3 00
American			38 @ 40
Japan wax			8½@ —
Licorice, mass, domestic Greek			8 @ 12
Spanish			17 @ 24
domestic Spanish			17 @ 24
stick, domestic brands			16½@ 33½
foreign brands			21½@ 25½
Lithia, carb			3 10 @ 3 20
Lupulin			17 @ 25
Lycopodium			31 @ 32
Manna, large flake			50 @ 55
small flake			28 @ 30
sorts			— @ 25
Menthol			1 85 @ 1 90
Myrbane oil			15 @ 18
Musk, pods, Cab		oz.	4 00 @ 6 00
Nepaul			14 00 @18 00
Tonquin			10 00 @15 00
grain Cab			7 50 @ 8 50
Canton, extra			— @ 1 00
good			18 00 @20 00
Nepaul			18 00 @19 00
Tonqu'n			19 00 @20 00
druggists'			17 00 @18 00
Mustard oil			— @ 45
Naphthaline, ball		lb	2¼@ —
crystals			2¼@ 2½
flakes			2¼@ —
Nux vomica			1½@ 2
Phosphorus		lb.	50 @ 75
Precipitate, red			76 @ 78
white			81 @ 83
Potash Perman			19 @ 20
Potassium, bromide, bulk			42 @ 43
cyanide	"		27 @ 28
iodide	"		2 35 @ 2 40
Quicksilver			72 @ 52½
Rochelle salts			18½@ 19
Salicine, bulk			— @ 2 65
Salol, bulk			— @ —
1 lb bots			3 10 @ 3 50
½ lb bots			3 15 @ 3 55
¼ lb bots			3 25 @ 3 65
ounces			25 @ 30
Santonine			2 40 @ 2 50
Sesame oil		gal.	— @ 62½
Silver nitrate		oz.	40 @ 41½
Spermaceti, blocks		lb.	29 @ 30
cakes			30 @ 31
Strontia, nitrate			7½@ 7¾
St. John's bread			1¾@ 2
Sugar of milk, cob			— @ 16
powdered			10 @ 12
Sulphur, roll			— @ 1 60
flour			1 65 @ 1 75
Strychnine		oz.	1 15 @ 1 25
Tamarinds		keg.	2 75 @ —
Thymol		lb.	— @ 1 70
Vanillin,		oz	2 00 @ 2 50
Venice turpentine		lb.	15 @ 17
Zinc chloride, gran			5½@ 8
sulphate			2½@ 6

Balsams.

Copaiba—Central American			37½@ 41
Para			42 @ —
Solidifiable			45 @ 48
Fir—Canada		gal	1 70 @ 1 75
Oregon			70 @ 75
Gurjun		lb	10 @ 15
Peru			1 90 @ 1 95
Tolu			55 @ —

Barks.

Angostura		lb	6½@ 7
Bayberry			3½@ 4
Buckthorn			— @ 4½
Cascara sagrada, 1896			3½@ 4
Cascarilla			7 @8
Canella			6 @ 6½
Cinchona—Red, true			12 @20
Common			7 @12
Yellow, true			12 @20
Common			7 @11
Condorango			— @15
Coto			16 @17
Elm, common			— @ 9
select			11 @12
Mezereon			@ 9
Oak, red			— @ 4
white			— @ 4
Orange peel—Curacoa			— @ 3½
Malaga, ribbons			— @ 6
quarters			9 @14
Trieste			— @ 5
Prickly ash			— @ 8
Pomegranate of fruit			— @ 8
of root			11 @12
Quebracho			— @10
Sassafras			6 @ 6½
Simaruba			13½@—
Soap, whole			@ 6
crushed			— @6½

Beans.

Calabar		lb.	— @ 8
St. Ignatius			20 @ 22
Tonka—Angostura			1 60 @ 1 70
Para			15 @ 20
Surinam			40 @ 45
Vanilla—Mexican, whole			10 00 @15 00
cuts			9 00 @ 9 25
Bourbon, whole			7 50 @ 9 00
Tahiti, whole			— @ 4 50

Berries.

Cubeb		lb.	6 @ 8
Fish (Cocculus Indicus)			3½@ 3½
Juniper			2½@ 2½
Laurel			— @ 4
Prickly ash			— @12

Essential Oils.

Almond—bitter		lb	3 00 @ 6 00
artificial			75 @ 80
Amber—German, crude			14 @ 15
rectified			— @ 24
Anise			1 80 @ 2 00
Bay			— @ 2 75
Bergamot			1 65 @ 2 00
Cade			14 @ 15
Cajeput—native			55 @ —
ordinary			45 @ 50
Camphor			— @ 15
Caraway seed			1 10 @ 1 15
twice rectified			1 35 @ 1 45
Cassia			1 25 @ 1 60
Cedar leaf			35 @ 40
Cinnamon Ceylon, heavy			8 75 @ 9 00
Citronella, native			27 @ 31
Cloves			42½@ 45
Copaiba			75 @ 80
Coriander			8 00 @ —
Croton			1 15 @ 1 20
Cubeb			75 @ 80
Cummin			3 00 @ —
Erigeron			65 @ —
Eucalyptus, American			50 @ 60
Australian			70 @ 75
Eucalyptol			— @ 1 75
Fennel seed			— @ 1 25
Geranium, Turkish			— @2 00
rose French			10 00 @15 00
African			5 50 @ 8 00
Hemlock			33 @ 35
Juniper—rectified			@ 70
twice rectified			1 20 @ —
wood			25 @ 30
Lavender flowers			1 25 @ 1 35
garden			35 @ 50
spike			75 @ 90
Lemon			90 @ 1 10
concentrated			— @40 00
Lemongrass, native			1 00 @ —
Mace, expressed			— @ 1 15
Malefern			1 75 @ —
Mustard—natural			6 00 @ —
artificial			3 50 @ 3 60
Neroli—petale, big			28 00 @30 00
bigarade			— @24 00
Nutmegs			1 25 @ 1 40
Orange, bitter			2 75 @ 3 25
sweet			1 65 @ 1 80
concentrated			— @55 00
Origanum			17 @ 22
Patchouly—leaf			— @ 7 50
cultivated			— @ 8 50
Pepper, commercial			70 @ 75
Peppermint—tins			1 10 @ 1 25
bottles			— @ 1 45
Pennyroyal			75 @ 80
Petit grains, French			4 00 @ 4 25
Pimento			1 35 @ 1 60
Rhodium			2 00 @ 6 00
Rose, as to brand		oz.	6 00 @ 7 00
Rosemary—commercial		lb.	25 @ 35
Trieste			— @ 50
flowers			72½@ 1 00
Sandalwood—East India			3 50 @ 4 00
West India			1 75 @ 2 00
Australian			— @ 3 00
Sassafras—natural			38 @ 39
artificial			37 @ 38
Spearmint			1 50 @ 1 60
Spruce			28 @ 30
Tansy			1 50 @ 1 60
Thyme—red, French			80 @ 85
white, French			1 00 @ 1 05
Wintergreen—natural			1 10 @ 1 20
artificial			47½@ 50
Wormseed—Baltimore			— @ 3 25
Wormwood, pure			2 50 @ —
Ylang ylang			45 00 @55 00

Flowers.

Arnica			6 @ 6¼
Chamomile, Belgian			11 @ 14
German			20 @ —
Insect,			22 @ 24
Lavender, ordinary			2½@ 3½
extra			5 @ 10
Poppy Heads			— @ 11
Rosemary			— @ 15
Saffron, American			15 @ 16
Alicante			— @5 00
Valencia			10 50 @ —

Gums.

Aloes, Barbadoes		lb.	5 @ 6
Cape			— @ 7
Curacoa			2½@ 2¾
Socotrine, true			20 @ 25
Ammoniac			20 @ —
Arabics, Firsts			57 @ 59
Seconds			— @ 37
Thirds			— @ 30
Fourths			23 @ 24
Siftings			— @ 15
Sorts			19 @ 20
Asafetida			18 @ 20
Benzoin			26 @ 34
Camphor, American bbls			— @ 39
cases			— @ 40
Compressed			39 @ 41
English			40 @ 42½
Japan			40 @ 43
Chicle			— @ 30
Euphorbium			11 @ 13
Galbanum			70 @ 75
Gamboge			38 @ 40
Guaiac, ordinary			12 @ —
medium			17 @ —
select			22 @ —
Kino			2 40 @ —
Mastic			39 @ 40
Myrrh			18 @ 25
Olibanum, siftings			4 @ 4½
sorts			5½@ —
tears			8 @ 9
Sandarac			18 @ 20
Scammony, Aleppo			— @2 75
resin			2 55 @2 75
virgin			— @6 50
Senegal, picked			19 @ 24
sorts			15 @ 16
Tragacanth, Aleppo, Firsts			— @ 66
Seconds			50 @ 55
Thirds			40 @ 45
Fourths			32 @ 34
Turkey, Firsts			65 @ 75
Seconds			48 @ 58
Thirds			— @ 45

Herbs and Leaves.

Aconite		lb.	— @ 9
Althea			— @12
Belladonna			9 @10
Buchu, short			8 @11
long			— @16
Coca, Huanuco			18 @20
Truxillo			— @12
Deer Tongue			— @ 33½
Damiana			— @15
Digitalis			7½@ 8
Doggrass			4½@ 5
Eucalyptus			— @ 4
Grindelia robusta			7 @ 8
Henbane (hyoscianus)			6½@ 8
Horehound			— @ 4
Indian hemp (Cannabis Indica)			10 @12
Jaborandi			— @12
Laurel			— @ 3
Lobelia			— @10
Matico			15 @18
Marjoram			— @—
French			8 @12
Prince's pine			— @ 5
Rose, red			45 @—
pale			13 @15
Rosemary			3 @ 4
Rue			— @16
Sage, Italian picked			8½@ 8½
Savory			— @ 3½
Senna, Alex. garbled and sifted			15 @22
siftings			7½@ 8
Tinnevelly			4 @12
Stramonium			— @ 5
Thyme			— @ 8½
Uva Ursi			— @ 8½
Yerba Santa			— @ 6

Roots.

Aconite, German		lb.	— @ 10
Alkanet			— @ 5½
Althea, whole			8½@ 9
cut			14 @ 15½
Angelica, German			14 @ 15
American			7 @ 8
Arnica			10 @ 11
Belladonna			10½@ 11
Black Cohosh			— @ 8½
Blood			— @ 15
Burdock			— @ 8
Calamus, bleached			— @ 50
unble'd, split & peeled			— @ 6½
Colchicum			— @ 6
Colombo			4½@ 10
Culvers			— @ 8½
Dandelion, German			10 @ 12
American cut			— @ 8
Elecampane			4 @ 5
Galangal			— @ 7
Gentian			6 @ 6½
Ginseng, Southern			2 70 @ —
Northern			3 25 @ —
Northwestern			2 90 @3 00
Ginger, Jamaica, unbleached			18 @ 20
bleached			20 @ 22
Golden seal			25 @ 26
Hellebore, white, powdered			9 @ 10
whole			— @ —
Ipecac Rio			1 70 @1 80
Jalap			10 @ 11
Kava Kava			11 @ 12
Lady slipper			— @ 14
Licorice, ordinary			2½@ 3½
selected, bdls			6 @ 8
Lovage, American			— @ 22
German			— @ 9
Mandrake			4½@ 5½
Orris, Florentine			13 @ 15
Verona			10 @ 12
fingers			— @ 75
Pareira brava			— @ 5
Pellitory			— @ 14
Pink			18 @ 20
Rhatany			12 @ 12½
Rhubarb, Canton			35 @ 45
Shensi			45 @ 70
High dried			25 @ 35
clippings			21 @ 29
Sarsaparilla Honduras			28 @ 34
Mexican			5 @ 5¼
Senega, Southern			— @ 35
Minnesota			22 @ 24
Manitoba			— @ 22
Snake, Canada			— @ 14
Texas			19 @ 20
Virginia			— @ —
Stillingia			— @ 3½
Squills			4 @ 4½
Valerian, German			— @ 10
Belgian			5½@ —
English			20 @ 25
Vermont			— @ 14
Yellow dock			— @ 4½

Seeds.

Anise, Italian, sifted		lb.	5 @ 5½
Russian			— @ 4
star			— @ 23
Canary Sicily			— @ 2
Smyrna			— @ 1¾
La Plata			— @ —
Caraway, Dutch			— @ 4½
Cardamoms, Bleached			80 @1 10
Decorticated			90 @ —
Celery			6½@ 7
Colchicum, German			9½@ 10
Coriander, Natural			— @ 2
bleached			— @ 2¼
Cummin, Malta			— @ 7
Fennel, German			5 @ 6¼
Italian			—@ 4¼
Flax		bbl.	—@4 37½
ground		lb.	— @ 2½
Fenugreek			3½@ 3¾
Guinea grains			6 @ 7
Hemp, Russian			— @ 2½
Lobelia			— @ 22
Millet			— @ 1¾
Mustard, Cal, yellow			— @ 2¾
brown (Trieste)			— @ 3¼
Bari, brown			— @ 3¾
Bombay, brown			2¾@ 2¾
Poppy, blue			4 @ 4½
Quince, German			45 @ 50
Rape, English			3½@ 4
German			2½@ 2¾
Sunflower			2½@ 3
Wormseed, Levant			— @ 7

Shellac.

D. C		lb	25 @28
V. S. O			22½@23
Triangle G			22½@23
Diamond I			26 @27
S. S			20 @22
S. O. S			20 @21
T. N			16 @17
Garnet, A. C			17½@18
Button			22 @24
Bleached			17½@18

Spices.

Cassia, Batavia, No. 1		lb	17 @17½
broken			14 @15
Canton, matted rolls			8 @ 8¾
broken			5 @ 5½
Saigon, rolls			40 @40½
broken			32 @32½
Buds			— @25
Cloves, Amboyna			10 @11
Zanzibar			4½@ 4¾
stems			2¾@ 3
Ginger, African			4½@ 4¾
Calcutta			4 @ 4¼
Cochin, A. B. C			7¼@ 7½
D			5½@ 6
Mace, Banda			40 @42
Batavia No. 2			34 @35
Penang			40 @42
Nutmegs, 110's			34 @34½
Pepper, black, Acheen heavy			— @ 6
Singapore			6¾@ 7
West Coast Sumatra			6 @ 6¼
white, Penang			9¾@ 9¾
Singapore			—@11½
red, capsicums			6½@ 7
Zanzibar			11 @11½
Pimento, Jamaica, prime			5½@ 6
grinding			— @ 5½

Chemicals.

Heavy Chemicals.

Alkali, 48 % cent., Solvay			75 @ 85
ammonia, high test			70 @ 75
Bleach, over 35 % cent			1 90 @2 00
Salt cake			45 @ —
Soda ash, carb. 48 % cent			95 @1 00
high test			95 @1 10
caustic, 48 % cent			1 10 @1 20
Newcastle, 48 % cent			— @ —
high test			— @ —
Soda bicarb., English			2 75 @3 00
American			1 50 @3 50
crystal carbonate			1 60 @1 85
Caustic solvay 60 % cent			2 30 @2 40
70 " "			2 00 @2 05
74 " "			2 05 @2 10
foreign caustic, 60 % cent			2 30 @2 40
70 " "			2 00 @2 10
74 " "			2 10 @2 15
76 " "			2 30 @2 35
Sal, English			57½@ 70
American			65 @ 80

Acids.

Acid, acetic			1 30 @1 45
chemically pure			15 @ 20
oxalic			7¼@ 7¾
Pyroligneous			8 @ 12
sulphuric, 60 deg			80 @ 90
66 deg			1 00 @1 25
bulk 50 deg			6 50 @7 50
muriatic, 18 deg			1 00 @ 1¼
20 deg			1½@ 1¾
22 deg			1¾@ 1¾
nitric, 36 deg			3½@ 4¼
38 deg			3½@ 4¼
40 deg			4 @ 4¼
42 deg			4½@ 5¼
tartaric crystals			30 @ 30½
powdered			30½@ 31

Miscellaneous Chemicals.

Acetate of lime, gray	lb.	1 25 @1 30
brown		80 @ 85
Alum, lump		1 65 @1 75
ground		1 70 @1 80
porous		1 50 @2 00
Argols, plates		15½@ 16
red		2 75 @3 00
Arsenic, white		5½@ 6
red		7½@ 8
Brimstone, crude, 2ds	per ton	20 50 @20 75
3ds		20 00 @20 25
Cream tartar, crystals, p c	lb.	— @ 23½
powdered, 99 p c		— @ 23½
Chloride of calcium		90 @ 95
Copperas		50 @ 60
Glauber salts		55 @ 65
Nitrate of lead		6 @ 6¼
soda		1 65 @1 67½
Chlorate of soda		11¼@ 11½
Sugar of lead, brown		5 @ 5¼
white		7½@ 7¾
Saltpeter, crude		3 @ 5¼
refined		4¼@ 5½
Sulphate alumina		1¼@ 1¾
Vitriol blue		3 50 @3 75

Ammoniates, Potashes, Etc.

Ashes, pot, 1st sorts	lb	3½@ 4
pearl		5¾@ 6
Potash, chlorate		9¼@ 9¾
powdered		9¾@ 10
carb		5¼@ 5¼
caustic		4½@ 6
dbl m'ure salt 48@53	cent.	1 08 @1 15
dbl m'ure salt 48@53	cent. less than 25 tons	26 00 @33 00
sulph of, basis 90@98	cent.	1 99½@2 03
90@98	cent. less than 25 tons	40 00 42@ 00
Kainit, 23	cent. S. of P. ton	8 80 @9 30
less than 25 tons		17 00 @18 75
Sylvinit, 35@37	ct P. unit	39 @ 45
Aqua am'ia (in cbys) 16	ct. lb	3½@
18 deg		4 @ 5
20 deg		5¼@ 5¾
26 deg		6¼@ 6¾
Ammoniac, sal, gray		4½@ 5
granulated		5½@ 6
lump		7¾@ 8
Ammonia, sulphate		2 05 @2 10
Potash muriate, 100 lbs		1 78 @1 90
less than 25 tons		39 00 @42 50

Ammoniates, Etc.:

Blood, dried, red, per unit, high		1 75 @ 1 80
low grade, per unit		1 6½@ —
Concentrated tankage per unit		1 60 @ 1 65
Bones, rough, per ton		16 00 @17 00
ground, per ton		21 50 @22 00
Bone meal		19 00 @22 00
Bone black, refuse		18 00 @18 50
Fish guano, dried		17 50 @18 00
acidulated		9 50 @10 00
Phosphate rock, f. o. b. Char'n		3 45 @ 3 50
f. o. b. Peace River		2 50 @ 3 00
Land Pebble 70 per cent		3 00 @ 3 25
Acid, phosphate, 15@18 per cent		50 @ 51

Dyestuffs.

Acid, picric, best crystals	lb.	23 @ 25
tannic, commercial		38 @ 50
crystals		95 @ 1 00
Acetate of soda		3½@ 6
Albumen, egg		53 @ 56
blood		19 @ 23
Annatto		16 @ 25
seed		5½@ 7
Antimony, oxymuriate		4 @ 6
salt 65 per cent		16 @ 17
47 per cent		12½@ 15
tartar emetic		25 @ 30
Bichromate of potash, Scotch		10 @ 10¼
American		10 @ 10¼
Bichromate of soda		8½@ 8¾
Carmine of indigo		60 @ 75
Cochineal, Teneriffe silver		26 @ 27
black		28 @ 29
gray black		33 @ 34
Cudbear, French		12 @ 18
concentrated		23 @ 25
English		10 @ 18
Cutch		4½@ 7¼
Dextrine, imported		4½@ —
domestic		4¼@ 4¾
corn		2 @ 2¼
Divi Divi	ton	@40 00
Flavine	lb	15 @ 25
Fustic stick	ton	11 00 @18 50
Gambier	lb.	2 65 @ 2 75
Garancine		6 @ 8
Hyposulphite of Soda		1 65 @ 2 00
Indigo, Bengal, low grade		60 @ 82½
medium		85 @ 1 00
high grade		1 00 @ 1 30
Kurpahs		70 @ 1 00
Guatemalas		75 @ 1 15
Manila		45 @ 55
Madras		25 @ 40
Indigotine		95 @ 1-80
Logwood stick	ton.	15 00 @22 50
Madder, Dutch	lb.	@ 8
French		6 @ 7½
Myrabolans		1¾@ 2¼
Muriate of tin		6 @ 8
Nitrate of iron, commercial		1 @ 1½
true		3½@ 4½
Nutgalls blue Aleppo		12 @ 12½
Chinese		15 @ 15½
Persian berries		7 @ 8
Prussiate of potash, Am. yel		13½@ 14
red		37 @ 38
Scotch yel		13½@ 14
red		37 @ 38
Ger yel		13½@ 14
red		37 @ 38
Prussiate of soda		11¾@ 12¼
Phosphate of soda		3 @ 3¼
Quercitron	ton.	18 00 @22 50
Sago flour		1 70 @ 1 80
Salts of tartar		5½@ 7
Soluble oil		6 @ 7½
Sumac, Sicily prime	ton.	40 00 @38 00
Virginia		35 00 @36 00
Starch corn	lb.	1½@ 1¾
potato		2¼@ 2½
wheat		4½@ 5½
Stannate of soda, 50 soluble		8 @ 12
40. soluble		6 @ 10
25. soluble		5 @ 8
Tin crystals		9½@ 9¾
Tapioca flour		3½@ 3¾
Vanadiate ammonium	oz.	— @ 60

Coal Tar Colors

Alizarine		14 @ 18
Aniline oil		14 @ 15½
salt, crystals		14 @ 15½
Bismarck brown		45 @ 75
Eosine		1 00 @ 2 50
Fast red		35 @ 55
Fast yellow—acid		45 @ 75
Fuchsine crystals		75 @ 1 25
Methylene blues		1 50 @ 2 50
Nicholson (alkali) blue, 3B		2 10 @ 3 00
5B		3 75 @ 4 00
red shade		2 00 @ 2 25
Nigrosine		80 @ 1 25
Orange		25 @ 90
Safranine		1 00 @ 2 00
Scarlet R		28 @ 50
RR		30 @ 50
RRR		35 @ 60
Soluble blue—green shade		25 @ 2 50
Violet—2R		1 30 @ 1 25
2B		1 00 @ 1 25
3B		1 00 @ 1 50

Chipped Dyewoods, Etc:

Barbary root, cut	lb.	3½@ 4
Barwood		2 @ 2¼
Camwood		6 @ 8
Fustic, Jamaica		1¼@ 1½
Cuban		1¼@ 1¾
Green ebony		8 @ 8½
Hypernic		3½@ 4¼
Logwood, Campeachy		1½@ 2
Nicwood		2 @ 2½
Peachwood		3½@ 3¾
Redwood		2¾ @ 3
Red sanders		2¾ @ 3
Turmeric ground		4½@ 5
powdered		5 @ 5½

Extracts

Archil, double	lb	8 @ 13
concentrated		16 @ 18
Barberry, French		22 @ 28
Chestnut		3½@ 4½
oak		2½@ 3½
Hemlock		3½@ 4½
Fustic, solid		8½@ 10
liquid, 51 deg		8 @ 14
Gall		15 @ 18
Indigo		6½@ 15
Logwood, solid		6½@ 12
liquid, 51 deg		5½@ 10
42 deg		4 @ 7
Persian Berry		13 @ 15
Sumac		3 @ 4½

Comparative Prices.

On Aug. 2, in 1894, 1895 and 1896.

	1896	1895	1894
Chemicals.			
Bleaching powder	1 60	1 85	1 68½
Brimstone, 3ds	$18 00	$15 75	$22 25
Caustic soda, 70 p. c.	2½	1 95	2 50
Caustic soda, 60 p. c.	2 37½	2 25	2 80
Sal soda, Am	65	65	87½
Soda ash, 48 p. c. carb	1 10	95	1 25
Soda ash, 48 p. c. caustic	1 25	1 15	1 25
Soda ash, 48-58 p. c. N. C.	—	—	—
Soda alkali, 48 p. c. B. M.	80	92½	1 05
Soda nitrate	1 77½	1 70	2 15
Cream tartar, crystals	26	19¾	17
Muriate of potash	1 78	1 78	1 80
Chlorate of potash	8½	9¼	12½
Kainit	8 80	8 55	9 00
Paints.			
White lead in oil	5¾	5½	7¼
Litharge, Am. pow'd	4¾	4¾	5¼
Paris green	12½	16½	20
Orange mineral	6¾	6¾	7¾
Ven. red, English	1 50	1 75	1 25
Ven. red, American	60	60	70
Barytes	$14 00	$14 00	$20 00
Whiting, commercial	40	27½	35
Drugs.			
Opium	2 40	1 60	2 10
Morphine, domestic	1 45	1 50	1 80
Quinine, makers	26½–30	25	25
Quinine, dealers	28½	24¾	24
Alcohol	2 31	2 34	2 30
Borax, city	5¾	5¼	8
Beans, tonka, (Ang)	2 00	1 85	1 75
Cubeb, XX	8	10	12
Cuttlefish	8½	8¼	8¼
Glycerine, American	16¼	11	11½
Oil, castor, city	9¾	10	14½
Oil, cod liver, Nor	$50 00	$44 00	$25 00
Oil, cassia	1 50	1 50	80
Oil, peppermint, tins	1 50	1 85	2 35
Oil, sassafras	42	32	34
Quicksilver	48½	53½	49
Asafœtida	12	15	14
Gum arabic, sorts	19	14½	11
Camphor	48	58	88
Shellac, D. C	28½	39	32½
Senna, Alex. Nat'l	16	16	12
Senega root	26	40	40
Ipecac	1 45	1 25	98
Jalap	11	18	19
Canary seed, Smyrna	1¾	2½	3½
Caraway seed, Dutch	5¾	6¼	6¾
Mustard seed, Cal. yel	2¼	2¾	4
Rapeseed, German	2¾	2¾	2 9-16
Oils			
Cottonseed, prime, S. Y.	22½	28	32½
Olive Sicily	48	56	84
Cocoanut, Ceylon	5¼	5½	5¾
Lard, prime city	38	51	54
Linseed, domestic	31	59	54
Menhaden, prime crude	18	23	21
Whale, bleached winter	40	41	44
Sperm, bleached winter	49	57	70
Oil cake, western	$15 75	@ —	$23 25
Spirits turpentine	24	27¼	28¾
Dyestuffs			
Bichromate, potash Am.	10	10	9
Cochineal, Teneriffe S	28	28	24
Cutch, bag	4½	4¾	6
Gambier	3 50	4¾	4
Indigo, Bengal, h gr'de	1 10	1 15	1 25
Prussiate potash, yel	16½	19	24½
Sumac, Sicily, prime	$46 00	$52 00	$55 00
Starch, corn	2	2¾	1 4-5

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Week ending July 30.

ACID—2 cks, C Bischoff & Co, Noordland, Ant
120 cs, Schering & Glatz, Phoenicia, Hbg
ACETIC—1 cs, Booth & Co, Cevic, L'pool
BORACIC—30 cks, 39,297 lbs, Hammill & Gillespie, Kaiser Wm II, Genoa
CARBOLIC—12 cks, G S Page's Sons, Cevic, L'pool
OXALIC—25 cks, A Klipstein & Co, Llandaff City, Swansea
20 cks, J L & D S Riker, Boston City, Swansea
PHOS—2 cs, 100 lbs, Merck & Co, Amsterdam, R'dam
ALBUMEN—3 bbls, Edinger Bros & Jacobs, Paris, London
EGG—15 cs, 3,708 lbs, H Kohnstamm & Co, Martello, Hull
ALIZARINE—7 cks, B P Ducas Co, Kaiser Wm II, Genoa
1 ck, C Bischoff & Co, Phoenicia, Hbg
1 ck, V Koechl & Co, Amsterdam, R'dam
35 cks, Pickhardt & K, Amsterdam, R'dam
AMMONIA, CARB—8 cks, Roessler & H Chem Co, Phoenicia, Hbg
ANILINE COLORS—10 cks, O Hann & Bro, Noordland, Ant
10 cks, Lawrie & Buchanan, Noordland, Ant
8 cks, 4 cs, N Y & Boston Dyewood Co, Phoenicia, Hbg
1 cs, 1 ck, Steglich & B, Phoenicia, Hbg
6 cks, C Bischoff & Co, K Luise, Bremen
26 cks, 1 cs, Geisenheimer & Co, K Luise, Bremen.
20 cks, 6 kgs, A Klipstein & Co, St Cuthbert, Ant
12 cs, A Klipstein & Co, Tauric, L'pool
10 cks, S. C. Georgi, Amsterdam, R'dam
1 ck, Geisenheimer & Co, Friesland, Ant
16 bbls, 1 cs, J J Keller & Co, Amsterdam, R'dam
16 cks, 3 cs, Sykes & Street, La Touraine, Havre
18 cks, R Holliday & Sons, Cevic, L'pool
71 cks, V Koechl & Co, Amsterdam, R'dam
2 cks, C Bischoff & Co, Amsterdam, R'dam
10 cks, Pickhardt & K, Amsterdam, R'dam
OIL—10 dms, 11,919 lbs, R Holliday & Sons, Martello, Hull
23 dms, 22,688 lbs, W J Matheson & Co, Massachusetts, London
SALT—10 cks, C Bischoff & Co, Noordland, Ant
46 cks, A Klipstein & Co, St Cuthbert, Ant
63 bbls, B P Ducas Co, St Cuthbert, Ant
26 cs, J A & W Bird & Co, Cevic, L'pool
26 cks, W J Matheson & Co, Massachusetts, London
ANTIMONY—100 cks, 67,200 lbs, E H Hills' Son & Co, Martello, Hull
6 cks, 1,736 lbs, H H Smythe, Paris, London
ARCHIL—10 cks, J Campbell & Co, Massachusetts, London
ARGOLS—213 bgs, 15 cks, 66,488 lbs, C Pfizer & Co, Hesperia, Leghorn
5 cks, A Klipstein & Co, St Cuthbert, Ant
ARSENIC—134 cks, Nichols Chemical Co, Llandaff City, Swansea
BALSAM—10 cs, Stallman & Fulton, K Luise, Bremen.
COP—19 cs, 1,588 lbs, D A De Lima & Co, Holstein, Carthagena
10 cs, J W Wupperman, Grenada, Trinidad
4 cs, Flint, Eddy & Co, Grenada, Trinidad
BISMUTH—5 bbls, 3 cs, C Pfizer & Co, Paris, London
BLEACH—25 cs, Troy Laundry Mach Co, Tauric, L'pool
181 cks, A Klipstein & Co, St Cuthbert, Ant
50 cks, Fuerst Bros & Co, Martello, Hull
89 cks, F A Reichard, Friesland, Ant
131 cks, 170,372 lbs, J L & D S Riker, Cevic, L'pool
100 dms, 46,286 lbs, Roessler & H Chem Co, Amsterdam, R'dam
BONES—901 bgs, 68,103 lbs, M Guggenheim's Sons, Orizaba, Havana
555 bgs, Flint, Eddy & Co, City of Washington, Havana
BRISTLES—2 cks, E J Arbib & Co, Phoenicia, Hbg
2 cks, H Krochl, Phoenicia, Hbg
14 cks, 655 lbs, H Conheim, Phoenicia, Hbg
15 cks, 9 pkgs, Wells, Fargo & Co, Paris, London
BRONZE POWDER—5 cs, 2,480 lbs, J Marsching & Co, Lahn, Bremen
6 cs, 3,000 lbs, G Meier & Co, Lahn, Bremen
7 cs, 3,500 lbs, Jaenecke Bros & F J, Lahn, Bremen
1 cs, G W Sheldon & Co, Phoenicia, Hbg
22 cs, 4,400 lbs, G Benda, Phoenicia, Hbg
18 cs, Baer Bros, K Luise, Bremen
8 cs, Geistendorfer Bros, K Luise, Bremen
5 cs, G Meier & Co, K Luise, Bremen
4 cs, J Marsching & Co, K Luise, Bremen
1 cs, Fuchs & Lang Mfg Co, Phoenicia, Hamburg
2 cs, Hensel, B & L, Phoenicia, Hbg
CANARY SEED—500 bgs, C von Pustan & Co, Britannic, Liverpool
CARAWAY SEED—300 bgs, L German & Co, Amsterdam, Rotterdam
CARDAMOMS—6 cs, Parke, Davis & Co, Paris, London
CHALK, PREP—10 cs, 20 cks, R W Phair & Co, Amsterdam, Rotterdam
CHAMOMILE FLOWERS—5 cs, 1,100 lbs, Stallman & Fulton, K Luise, Bremen
CHAMOIS—1 cs, T L Lutkins, Britannic, Liverpool
1 cs, R Young, La Touraine, Havre
CHEMICALS—52 cs, Schering & Glatz, Normannia, Hamburg
2 cs, Merck & Co, Lahn, Bremen
4 bbls, 35 cs, Merck & Co, Amsterdam, Rotterdam
CHEMICAL COMPOUND—50 dmjs, 2,200 lbs, Merck & Co, K Luise, Bremen
1 pkg, G W Sheldon & Co, Lahn, Bremen
2 cs, Fischer Chem Imp Co, Lahn, B'men
1 ck, Kennedy & Moore, Noordland, Ant
1 cs, Am Express Co, Normannia, H'b'g
6 cs, Fries Bros, La Touraine, Havre
1 cs, Dodge & Olcott, La Touraine, Havre
5 cks, Pickhardt & K, Amsterdam, R'dam
PREP—2 cs, 94 lbs, Stallman & Fulton, Noordland, Ant
1 cs, Reinschild Chem Co, Phoenicia, H'b'g
20 pkgs, Schering & Glatz, Phoenicia, Hamburg
10 cks, Baldwin Bros, Cevic, Liverpool
1 cs, V Koechl & Co, Amsterdam, R'dam
50 cks, Roessler & H Chem Co, Amsterdam, Rotterdam
SALT—5 cs, Richards & Co, Phoenicia, Hamburg
CHINA CLAY—400 cks, Hammill & Gillespie, Cevic, Liverpool
CHROME, GREEN—10 kgs, C F Zentgraf, Friesland, Antwerp
YELLOW—1 cs, A V Benoit, La Touraine, Havre
COAL TAR PREP—3 cs, G W Sheldon & Co, Phoenicia, Hamburg
1 ck, C Bischoff & Co, Noordland, Ant
2 cs, N Y & B Dyewood Co, Phoenicia, Hamburg
7 bbls, 20 cks, A Klipstein & Co, St Cuthbert, Antwerp
50 cks, V Koechl & Co, Amsterdam, Rotterdam
COCA LEAVES—110 bls, 11,642 lbs, Schieffelin & Co, Finance, Colon
COCOA BUTTER—40 bls, 6,880 lbs, R F Downing & Co, Amsterdam, Rotterdam
COLORS—1 ck, 1 cs, P H Petry & Co, Lahn, Bremen
3 cs, Knauth, N & K, Phoenicia, H'burg
20 cks, Gabriel & Schall, Phoenicia, H'burg
3 cs, J Marsching & Co, Britannic, L'pool
2 cs, G Benda, Lahn, Bremen
6 cks, J Cantor, Paris, London
2 cs, 2 bbls, Munroe & Co, Cevic, Liverpool
CORKS—36 bls, 2,753 lbs, J Torras, Paris, Lisbon
CREOSOTE—1,000 bbls, 40,000 gls, Schoellkopf, H & M, Mobile, London
CUTCH—250 cs, 28,000 lbs, Leaycraft & Co, Cevic, Liverpool
DEXTRINE—121 bgs, W Caldwell & Co, Cucassia, Glasgow
200 bgs, W Caldwell & Co, Ethiopia, Glasgow
DIVI DIVI EXT—1 bbl, J J Keller & Co, Amsterdam, Rotterdam
DRUGS—1 cs, P H Petry & Co, Kaiser Wm II, Genoa
10 cs, 7 bls, G W Sheldon & Co, Massachusetts, London
DUTCH METAL, CLIP—25 cs, R F Downing & Co, K Luise, Bremen
1 cs, Grempler & H, K Luise, Bremen
LEAF—2 cs, J Marsching & Co, Lahn, Bremen
2 cs, Fuchs & Lang Mfg Co, Phoenicia, Hamburg
DYEWOOD EXT—40 bbls, Oakes Mfg Co, St Cuthbert, Antwerp
ETHEL, CHLO—4 cs, Fries Bros, La Touraine, Havre
FISH SOUNDS—2 cs, R W Phair & Co, Phoenicia, Hamburg
2 cs, Flint, Eddy & Co, Caracas, Curacoa
FORMALDEHYDE—60 dmjs, Kny Scherer Co, Phoenicia, Hamburg
FULLER'S EARTH—300 bgs, 25 tons, A de Ronde & Co, Llandaff City, Swansea
1,000 bgs, Hammill & Gillespie, Cambrian, London
1,460 bgs, Hammill & Gillespie, Massachusetts, London
420 bgs, Hammill & Gillespie, Massachusetts, London
FUSTIC—65 tons, Eggers & Heinlein, H H Chamberlain, San Blas
3,837 pcs, Williams & Co, City of Washington, Tampico
GAMBIER—1,373 bls, J H Recknagel, Stella del Marc, Singapore

A. Klipstein & Company

122 Pearl Street, NEW YORK

BOSTON 283-285 Congress St; PHILADELPHIA 60-62 N. Front St. CHICAGO 142 Michigan St.

13 Mathewson Street, Providence, R. I.

Aniline Colors, Dyestuffs and Chemicals

Made by the Society Chem. Industry.

Chlorate of Potash

GELATINE—20 cs, H Kohnstamm & Co, Spaarndam, Rotterdam
45 cs, H Kohnstamm, Amsterdam, R'dam
29 cs, P Puttmann, Amsterdam, R'dam
50 cs, J Pallitz, Amsterdam, Rotterdam
GINGER—28 bbls, Macy & Dunham, Ardandhu, Kingston
20 bbls, J H Fay, Ardandhu, Kingston
30 bbls, D M Wygant, Ardandhu, Kingston
12 bbls, Gillespie Bros & Co, Ardandhu, Kingston
206 bgs, F H Leggett & Co, Nordkyn, Hamburg
8 bbls, D M Wygant, Adirondack, Kingston
142 bgs, R Crooks & Co, Cevic, Liverpool
GLASS, MIRROR—2 cs, P Weiderer, Lahn, Bremen
22 cs, Knauth, N & K, Amsterdam, R'dam
13 cs, Semon, Bach & Co, Amsterdam, Rotterdam
26 cs, S Binswanger, Amsterdam, R'dam
6 cs, O G Hempstead & Co, Amsterdam, Rotterdam
PLATE—20 cs, H H Cohn, Noordland, Ant
5 cs, Kny Scherer Co, Noordland, Ant
12 cs, Bendit, Drey & Co, St Cuthbert, Ant
10 cs, A Arnstein, Amsterdam, Rotterdam
4 cs, J Kahn, Friesland, Antwerp
2 cs, Heroy & M, Friesland, Antwerp
23 cs, H H Cahn, Friesland, Antwerp
WINDOW—411 cs, 24,792 lbs, Van Horne, Griffin & Co, St Cuthbert, Antwerp
1,424 cs, 96,710 lbs, Holbrook Bros, St Cuthbert, Antwerp
379 cs, Heroy & M, Friesland, Antwerp
GLUE—31 cks, S Isaacs & Co, Cambrian, London.

LITHOPONE—133 cks, Gabriel & Schall, K Louise, Bremen
99 cks, 32,738 lbs, Gabriel & Schall, Amsterdam, Rotterdam
LICORICE, ROOT—9 bls, Lehn & Fink, Britannic, Liverpool
905 bls, Bowring & Archibald, Masachusetts, London.
LOGWOOD—155 tons, J E Kerr & Co, Ardandhu, Belize
EXT—5 cks, C Bischoff & Co, Amsterdam, Rotterdam
LUPULIN—1 cs, F B Vandergrift & G, Phoenicia, Hamburg
MAGNESIA, CALC—5 cs, 250 lbs, G A & E Meyer, Martello, Hull
CARB—10 cks, 10 cs, 3,000 lbs, G A & E Meyer, Martello, Hull
CIT—5 cs, J Personini, Kaiser Wm II, Genoa
MAGNESIUM—4 cs, 220 lbs, G Gennert, K Luise, Bremen
MANGANESE, OXIDE—25 cks, Jas Lee & Co, Roumanian, Glasgow
MANNA—1 cs, J Personini, Kaiser Wm II, Genoa
MARJORAM—8 bls, 1,695 lbs, A U Andrus & Co, Kaiser Wm II, Genoa
MEDICAL, FLOWERS—5 cs, Lehn & Fink, Phoenicia, Hamburg
LEAVES—5 bls, Stallman & Fulton, Paris, London
2 bls, Lehn & Fink, Britannic, Liverpool
PREP—5 cs, Davies, Turner & Co, K Luise, Bremen
1 cs, Elmer & Amend, La Gascogne, Havre
2 cs, Merck & Co, Lahn, Bremen

46 pps, 4 pun, 9 hhds, Perry, Ryer & Co, Kiandra, Colombo
159 cs, United Oil Co, Cevic, Liverpool
50 cks, 111,886 lbs, E Hill's Son & Co, Kiandra, Cochin
267 cks, Paterson, Boardman & Co, Kiandra, Colombo & Cochin
CORIANDER—1 cs, T S Todd & Co, Prussia, Hamburg
DEAD—1,000 cs, Josiah Smith, Martello, Hull
ESS'L—15 cs, W Adams, Mobile, London
5 cs, G Lueders & Co, Lahn, Bremen
5 cs, G Lueders & Co, St Cuthbert, Ant
14 cs, A Chiris, Kaiser Wm II, Genoa
EUCALYPTUS—5 cs, J B Horner, Massachusetts, London
FUSEL—8 dms, Maas & Waldstein, St Cuthbert, Antwerp
8 cks, Knauth, N & K, Ambria, Stettin
6 dms, 6,345 lbs, Schoellkopf, H & M, St Cuthbert, Antwerp
JUNIPER—1 cs, G Lueders & Co, Lahn, Bremen
OLIVE—50 bbls, Welles & Welles, Kaiser Wm II, Genoa
1 ck, G Fernani, Hesperia, Leghorn
2 cks, Castle & Gotthell, Hesperia, Leghorn
100 bbls, 5,037 gls, Knauth, N & K, Hesperia, Leghorn
50 bbls, W C Benedict, Hesperia, Leghorn
20 bbls, Codman & Hall, Hesperia, Leghorn
75 cks, Societe H Alimentaire, Kaiser Wm II, Genoa
2 cks, J J Keller & Co, Sarnia, Leghorn
38 bbls, Manhattan Oil Co, Georgic, L'pool
PALM—1 ck, Oil Seeds Pressing Co, Tauric, Liverpool
82 cks, T M Marc & Co, Britannic, L'pool
19 cks, R Crooks & Co, Cevic, Liverpool
83 cs, United Oil Co, Cevic, Liverpool
ROSE—20 cs, 2,000 lbs, A A Stilwell, Kaiser Wm II, Genoa
1 cs, Schieffelin & Co, Umbria, Liverpool
THYME—3 cs, G Lueders & Co, Lahn, Bremen
7 cs, G Lueders & Co, Kaiser Wm II, Genoa
YLANG YLANG—2 cs, T T Grossmith, Kaiser Wm II, Genoa
ORANGE MINERAL—15 cks, 11,155 lbs, J W Coulston & Co, Noordland, Antwerp
PEEL—20 bgs, 4,614 lbs, Levy & Levis Co, Hesperia, Leghorn
50 bgs, 11,000 lbs, Leber & Meyer, Hesperia, Leghorn
WATER—5 cs, A A Stilwell, Kaiser Wm II, Genoa
PAINT—12 pkgs, A G Spalding & Co, Paris, London
PALM, STEARINE—6 bbls, Standard Paint Co, Phoenicia, Hamburg
PEPPER—12 bgs, 1,200 lbs, F H Leggett & Co, Megantic, London

ROSEWATER—11 cs, G Lueders & Co, Kaiser Wilhelm II, Genoa
22 cs, A A Stilwell, Kaiser Wilhelm II, Genoa
SAGO FLOUR—1 bg, W Caldwell & Co, Ethiopia, Glasgow
SALT CAKE—10 cks, A de Ronde & Co, Majestic, Liverpool
SANDALWOOD—137 bdls, J Clay, Britannic, Liverpool
SARSAPARILLA—25 bls, J W Wilson, City of Washington, Tampico
SENNA—25 bls, Stallman & Fulton, Paris, London
13 cs, 4,550 lbs, Dodge & Olcott, Paris, London
PODS—6 bls, Parke, Davis & Co, Paris, London
SHELLAC—2 bgs, 450 lbs, L Steinemann, Noordland, Antwerp
75 chts, L C King & Co, Britannic, L'pool
110 chts, L C King & Co, Massachusetts, London
SIENNA—50 cks, J W Coulston & Co, St Cuthbert, Antwerp
SOAP, CASTILE—200 cs, 8,145 lbs, Schieffelin & Co, Hesperia, Leghorn
STOCK—7 bbls, Arnold, Peck & Co, Cevic, Liverpool
SODA, ASH—14 cks, 80 bgs, J L & D S Riker, Cevic, Liverpool
63 cks, Wing & Evans, Cevic, Liverpool
CAUSTIC—25 cs, 2,487 lbs, Troy Laundry Mach Co, Tauric, Liverpool
50 dms, E Hill's Son & Co, Boston City, Swansea
SILICATE—5 bbls, 2,167 lbs, R F Downing & Co, Phoenicia, Hamburg
SULPH—26 cks, Kalle & Co, Amsterdam, Rotterdam
5 cks, R W Phair & Co, Amsterdam, Rotterdam
SPICE—35 bbls, 2 cs, Frame, Alston & Co, Grenada, Trinidad
SPONGE—63 bls, National Sponge & Chamois Co, Niagara, Nassau
130 bls, Lebess Sponge Co, Niagara, Nassau
187 bls, A Isaacs & Co, Niagara, Nassau
172 bls, Lasker & Bernstein, Niagara, Nassau
2 cks, Graziano & M, Kaiser Wm II, Genoa
167 cs, A Isaacs & Co, Paris, London
21 bls, J Mendy, City of Washington, Havana
88 bls, Vollman Sponge Co, Niagara, Nassau
7 bls, Park & Tilford, Niagara, Nassau
STROPHANTHUS SEED—3 bgs, Parke, Davis & Co, Paris, London
SUMAC—420 bgs, 30 tons, W R Russell & Co, Hesperia, Leghorn
EXT—40 bbls, B P Ducas Co, Kaiser Wm II, Genoa
18 bbls, J J Keller & Co, Amsterdam, Rotterdam

Cream of Tartar Tartaric Acid

GUARANTEED 99—100 Per Cent. Pure.

TARTAR CHEMICAL COMPANY, 47 Cedar St. N. Y

GLYCERINE—70 dms, 80,728 lbs, Marx & Rawolle, Kaiser Wilhelm II,, Genoa
150 dms, M Leibmann & Co, Cambrian, London
30 dms, Marx & Rawolle, Cambrian, London
GREASE—2 cks, Standard Paint Co, Kaiser Wilhelm II, Genoa
20 cks, A de Ronde & Co, Tauric, L'pool
2 cks, C A Johnson & Co, Cevic, L'pool
WOOL—200 bbls, 74,659 lbs, R F Downing & Co, K Luise, Bremen
100 bbls, Swan & Finch Co, Noordland, Antwerp
GUM—1 cs, A Klipstein & Co, St Cuthbert, Antwerp
10 bgs, H W Peabody & Co, Kaiser Wilhelm II, Genoa
1 cs, Lehn & Fink, Paris, London
ALOES—118 pkgs, Suzarte & Whitney, Caracas, Curacoa
CHICLE—8 bls, A S Lascelles & Co, Arandhu, Belize
SCAMMONY—1 cs, 200 lbs, J Clay, Phoenicia, Hamburg
SUB—10 cs, 2,205 lbs, Merck & Co, Phoenicia, Hamburg
TRAG—22 cs, 4,484 lbs, Thurston & Braidich, Paris, London
90 cs, 2,354 lbs, C Morningstar & Co, Kaiser Wilhelm II, Genoa
ZANZIBAR—20 cs, Paterson, Boardman & Co, Massachusetts, London
HYDROCHINON—1 cs, G Gennert, Nordkyn, Hamburg
INDIGO—3 cs, 450 lbs, P H Petry & Co, Britannic, Liverpool
AUX—15 cks, 22,621 lbs, A Klipstein & Co, Ambria, Stettin
INSECTICIDE—1 cs, Schieffelin & Co, Hesperia, Leghorn
INSECT FLOWERS—5 bls, Schieffelin & Co, Umbria, Liverpool
IODINE—64 kgs, Watjen, Toel & Co, Finance, Colon
JALAP—1 bl, Lehn & Fink, Britannic, L'pool
19 bls, H W Peabody & Co, Habana, Havana
JUNIPER BERRIES—132 bgs, 17,600 lbs, Fischer & Ewald, Hesperia, Leghorn
KOLA NUTS—65 bgs, Schoellkopf, H & M, Umbria, Liverpool
LEAD—8,893 pigs, 1,120,528 lbs., National Lead Co, Noordland, Antwerp
LEECHES—10 cs, M Meyers & Co, Normannia, Hamburg

11 cs, Copeland, S & S, Kaiser Wm II, Genoa
2 cs, Lehn & Fink, Phoenicia, Hamburg
17 cs, Dodge & Olcott, Kaiser Wm II, Genoa
12 cs, Boehringer & S, Amsterdam, R'dam
4 cs, Lehn & Fink, Paris, London
1 cs, Rinschild Chem Co, Phoenicia, H'burg
6 cs, E Fougera & Co, La Touraine, Havre
12 cs, R F Downing & Co, Paris, London
ROOTS—2 cs, Dodge & Olcott, Hesperia, Leghorn
45 bls, 2 pkgs, J Clay, Britannic, L'pool
SEEDS—9 cs, 497 bls, Lehn & Fink, Paris, London
MENTHOL—1 cs, T T Grossmith, Cambrian, London
MUSK—1 cs, Dodge & Olcott, Coastwise, Yokohama
MUSTARD SEED—50 bbls, Schieffelin & Co, Umbria, Liverpool
NAPHTHOL—28 cks, Roessler & H Chem Co, Phoenicia, Hamburg
NUTMEGS—20 cs, F H Leggett & Co, Cambrian, London
NUX VOMICA—522 bgs, C Pfizer & Co, Kiandra, Cochin
1,434 bgs, W H Brooks, Kiandra, Cochin
OCHER—35 cks, 23,767 lbs, J W Coulston & Co, Llandaff City, Swansea
OIL, ALMOND—9 cs, G Lueders & Co, Kaiser Wilhelm II, Genoa
1 cs, R W Phair & Co, Amsterdam, R'dam
5 cs, 150 lbs, Dodge & Olcott, Cambrian, London
CAKE—30 bgs, 3,300 lbs, A Merkel, K Luise, Bremen
CARAWAY—1 cs, 100 lbs, R F Downing & Co, Amsterdam, Rotterdam
CINNAMON—12 cs, 1,000 lbs, Dodge & Olcott, Kiandra, Colombo
CITRONELLA—23 cs, 2,070 lbs, Fritzsche Bros, Kiandra, Colombo
12 tanks, G A Alden & Co, Kiandra, Colombo
44 dms, 39,030 lbs, Dodge & Olcott, Kiandra, Colombo
COD—50 cks, Welles & Welles, Portia, Halifax
67 cks, Swan & Finch Co, Coastwise
COD LIVER—50 bbls, Leber & Meyer, Martello, Hull
COCOANUT—127 cks, R F Downing & Co, Kaiser Wilhelm II, Genoa
162 cks, T M Marc & Co, Britannic, L'pool
50 cks, Hewlett & Lee, Kiandra, Cochin

142 bgs, F H Leggett & Co, Amsterdam, Rotterdam
SHELLS—105 bgs, 16,716 lbs, F H Leggett & Co, Michigan, London
PERSIAN BERRY EXT—10 bbls, J J Keller & Co, Amsterdam, Rotterdam
PITCH, COAL TAR—985 bgs, 102 tons, W H Rankin, Roumanian, Glasgow
2,059 bgs, 180 tons, H F Watson, Cambrian, London
PLUMBAGO—24 bbls, Paterson, Boardman & Co, Mobile, London
193 cks, 193,868 lbs, W H Dumont, Phoenicia, Hamburg
2,781 bbls, Paterson, Boardman & Co, Kiandra, Colombo
POMADE—3 cs, A A Stilwell, Kaiser Wm II, Genoa
POTATO FLOUR—100 bgs, 22,046 lbs, S Oppenheimer, Phoenicia, Hamburg
POTASH, CARB—30 cks, 39,978 lbs, A Klipstein & Co, St Cuthbert, Antwerp
42 cks, 19,819 lbs, Jas Lee & Co, Phoenicia, Hamburg
CHLO—4 cks, 516 lbs, L Steinemann, Noordland, Antwerp
MURI—1,000 bgs, Battelle & Renwick, Phoenicia, Hamburg
PRUSS—85 cks, Roessler & H Chem Co, Palatia, Hamburg
PUMICE—95 cs, 13,227 lbs, A E Cerqua, Hesperia, Leghorn
500 bgs, 110,229 lbs, R J Waddell & Co, Hesperia, Leghorn
60 bbls, 20 bgs, P Larini, Hesperia, Leghorn
85 bgs, 40 bbls, R F Downing & Co, Hesperia, Leghorn
QUININE—59 cs, 31,700 ozs, G W Sheldon & Co, K Luise, Bremen
6 cs, 6,000 ozs, Boehringer & S, Amsterdam, Rotterdam

LEAF—110 bls, 61,600 lbs, W L Montgomery & Co, Hesperia, Leghorn
TAMARINDS—20 bbls, 1 cs, Bartram Bros, Pretoria, St Kitts
2 bgs, J Personini, Kaiser Wm II, Genoa
TEA, SWEEPINGS—52 bgs, Hensel, B & L, Massachusetts, London
THYME—25 bls, 5,512 lbs, H Nordlinger & Co, Britannic, Liverpool
30 bls, 6,600 lbs, A U Andrus & Co, Kaiser Wm II, Genoa
THYMOL—4 cs, T S Todd & Co, Prussia, Hamburg
ULTRAMARINE—14 cks, C F Zentgraf, Amsterdam, Rotterdam
1 cs, A V Benoit, La Touraine, Havre
VANILLA BEANS—9 cs, H Marquardt & Co, Havana, Havana
6 cs, P Harmony's Neph & Co, La Touraine, Havre
8 cs, P H Petry & Co, La Touraine, Havre
VANILLIN—1 cs, L P Rose, La Touraine, Havre
4 cs, Dodge & Olcott, La Touraine, Havre
VENETIAN RED—286 pkgs, J L Smith & Co, Umbria, Liverpool
WAX, CERESIN—121 bls, Smith & Nichols, Amsterdam, Rotterdam
ZINC, OXIDE—140 cks, 39,683 lbs, J A & W Bird & Co, Amsterdam, Rotterdam

WAREHOUSED.

ANILINE COLORS—10 cks, 10 cs, W J Matheson & Co, Amsterdam, Rotterdam
BRISTLES—17 cs, 2,267 lbs, H Kroehl, Kaiser Wilhelm II, Genoa
41 cks, 13,764 lbs, H Conheim, Phoenicia, Hamburg
BRONZE POWDER—3 cs, 1,035 lbs, G Meier & Co, K Luise, Bremen
2 cs, 710 lbs, J Marsching & Co, Lahn, Bremen

TINNOL, A Paste that Sticks

NO Rust Spots on Tin. NO Peeling Off. NO Discoloring of Labels.

WRITE FOR SAMPLE AND PRICES TO

The Arabol Manufacturing Co., 12 Gold St., New York.

Headquarters for SIZINGS, PASTES, GUMS and MUCILAGES for all Purposes.

POTASH
CYANIDE
PRUSSIATE
CHLORATE
CARBONATE
CAUSTIC and
All Heavy and Fine Chemicals

Soda Ash
Soda Prussiate
Sal Soda
Caustic Soda
Etc.

ACID
Acetic
Phosphoric
Carbolic
Etc.

Extracts
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PRECIP. CHALK

IMPORTERS—Commission Merchants—EXPORTERS.

FUERST BROS. & CO.

2 Stone St., NEW YORK, & 17 Bridge St.

Bleaching Powders

MINERALS
Fluorspar
Fullers Earth
China Clay
Barytes, Etc.

OILS
CASTOR
OLIVE
RAPE
COCOANUT
ESSENTIAL.

CORRESPONDENCE SOLICITED.

CHEMICAL COMP—5 cs, Fries Bros, La Touraine, Havre
DUTCH METAL CLIP—7 cs, J Marsching & Co, K Luise, Bremen
LIME BORATE—2,592 bgs, 565,438 lbs, C Pfizer & Co, Cevic, Liverpool
MEDICAL PREP—10 cs, Boehringer & S, Amsterdam, Rotterdam
OIL, ESS'L—15 cs, Graham, Hinkley & Co, Habana, Havana
OLIVE—3 cks, 447 gls, Societe H Alimentaire, Kaiser Wilhelm II, Genoa
POPPY SEED—395 bgs, G W Sheldon & Co, Thingvalla, Copenhagen
POTASH CARB—70 cks, A Klipstein & Co, St Cuthbert, Antwerp
SOAP, CASTILE—1,000 cs, J D Nordlinger, Hesperia, Leghorn
SPONGE—44 bls, A Isaacs & Co, Niagara, Nassau
150 bls, Lasker & Bernstein, Niagara, Nassau
VANILLIN—1 cs, Fries Bros., La Touraine, Havre

WITHDRAWALS FROM BOND.

Week ending July 30.

Aniline colors, cks	72
Cs	6
Bay rum, cks	1
Bronze powder, cs	6
Bristles, cks	1
Bronze powder, cs	3
Corks, bls	94
Dextrine, bgs	300
Dutch metal clip, cs	22
Glass, window, cs	187
Insect powder, bbls	175
Licorice paste, cs	55
Logwood ext, cs	20
Medical prep, cs	3
Oil, codliver, bbls	30
Harlem, cs	20
Olive, cks	7
Soda, caustic, dms	4
Sponge, bls	54
Strontia nit, pkgs	15
Sumac, bgs	300
Tapioca flour, bgs	25

Boston Imports.

ACID, OXALIC—20 cks, J L & D S Riker, Canada, Liverpool
ANILINE SALT—36 cs, J A & W Bird Co, Philadelphia, Liverpool
4 cks, J B Moors & Co, Bostonian, London
ANTIMONY—15 cks, Lepanto, Hull
ARSENIC—100 cks, Lepanto, Hull
ARCHILL—11 cks, J A & W Bird & Co, Lepanto, Hull
BLEACH—51 cks, J L & D S Riker, Roman, Liverpool
61 cks, Fuerst Bros, Lepanto, Hull
164 cks, J L & D S Riker, Philadelphia, Liverpool
191 cks, J L & D S Riker, Michigan, L'pool
120 cks, J L & D S Riker, Canada, L'pool
BRIMSTONE—5,602 bgs, Philadelphia, L'pool
CASTOR SEED—172 bgs, Brown Bros, Roman, Liverpool
CARBON—60 dms, Bostonian, London
CHINA CLAY—507 cks, Sylvania, Liverpool
140 cks, J B Moors & Co, Roman, L'pool
200 cks, Hammill & G, Roman, L'pool
60 cks, C S Bush, Roman, L'pool
250 cks, Michigan, L'pool
500 cks, Philadelphian, Liverpool
170 cks, Waldo Bros, Michigan, L'pool
445 cks, Hammill & G, Michigan, L'pool
COCOA BUTTER—100 bls, Georgian, London
CUDBEAR—9 cks, Pickhardt & Kuttroff, Virginian, London
FULLER'S EARTH—30 bgs, L A Salomon & Bro, Br Empire, London
GLASS, WINDOW—41 pkgs, Boston P & W G Co, Philadelphia, Liverpool
GLUE, PITCH—22 cs, A Jeffrey, Virginian, London
GREASE—9 cks, Sylvania, Liverpool
10 cks, W N Proctor, Philadelphia, L'pool
9 cks, Michigan, Liverpool
OIL—6 cks, W Underwood, Philadelphia, Liverpool
COD LIVER—20 bbls, Lepanto, Hull
OLIVE—25 cks, Michigan, Liverpool
SOD—30 bbls, Virginian, London
PAINT—1 ck, Bostonian, London
PITCH—500 cks, Bostonian, London
POTASH, CARBONATE—22 cks, Lepanto, Hull
SHELLAC—66 cs, Virginian, London
75 cs, Br Empire, London
SIGE—33 cks, A A Brigham, Bostonian, London
SOAP—100 bxs, A H Morse, Roman, L'pool
ASH—56 tcs, Wing & Evans, Philadelphian, Liverpool
13 tcs, 80 bgs, Wing & Evans, Michigan, Liverpool
CAUSTIC—50 dms, Edw Hill's Son Co, Roman, Liverpool
100 dms, Edw Hill's Son Co, Michigan, Liverpool
50 dms, International S S Co, Michigan, Liverpool
CRYSTAL CARB—56 bbls, J L & D S Riker, Michigan, Liverpool
SAL—56 bbls, Roman, Liverpool
ZINC OXIDE—110 bbls, J A & W Bird Co, Br Empire, London

Philadelphia Imports.

BISMUTH—4 bbls, 6 cs, Minnesota, London
CHINA CLAY—1,600 cks, Fidello, Fowey
CHALK—16 cks, Minnesota, London
CREOSOTE SALTS—696 bgs, Minnesota, London
FUSTIC—47,831 pcs, Sharpless D E Co, Mary Sanford, Tampico
KRYOLITE—89 4-5 cu fathoms, Penna Salt Mfg Co, Calcium, Ivigtut
GLOY—16 cks, H Taylor, Minnesota, London
PEPPER—654 bgs, Minnesota, London
PITCH—250 cks, Minnesota, London
POTASH, PRUSSIATE—10 cks, Minnesota, London
SHELLAC—60 cs, Brown Bros, Minnesota, London
TAR COAL—50 bbls, Minnesota, London
VENETIAN RED—50 bbls, Minnesota, London
ZINC OXIDE—25 bbls, Minnesota, London

Baltimore Imports.

BLEACH—121 pkgs, J L & D S Riker, Ulstermore, Liverpool
BRISTLES—1 ck, 1 cs, Mourne, London
COLORS—10 cks, Storm King, Antwerp
GLASS, WINDOW—230 cs, Sedgemore, L'pool
KAINIT—500 tons, Crefeld, Bremen
KIESERIT—600 tons, Asturia, Hamburg
MANURE SALT—1,500 bgs, Munchen, Bremen
PAINT—20 cks, 10 kgs, Sedgemore, Liverpool
PHOSPHATE—1,250 bgs, Storm King, Ant
SOAP—1 ck, Sedgemore, Liverpool
SODA, CRYSTAL CARB—56 bbls, J L & D L Riker, Sedgemore, Liverpool

Newport News Imports.

BLEACH—405 cks, J L & D S Riker, Kanawha, Liverpool

New Orleans Imports.

COAL TAR CREOSOTE—45 cks, Hermann, Antwerp
GLASS, WINDOW—3,992 bxs, Cayo Romano, Antwerp
PEPPER—600 bls, Cayo Romano, London
POTASH, CYANIDE—120 cs, Hermann, Ant
SHEEP DIP—1,000 bgs, Cayo Romano, London
SOAP—30 bxs, Markomannia, Hamburg

Montreal Imports.

ALUMINOFERRIC—42 bgs, Carthaginian, Liverpool
ALUMINA, SULPH—3 cks, Carthaginian, Liverpool
AMMONIA—6 cks, Carthaginian, Liverpool
AMMONIA, MUR—10 bbls, Memnon, Bristol
BLEACHING POWD—80 cks, Carthaginian, Liverpool
BLEACH—20 cks, J L & D S Riker, Lake Huron, Liverpool
BORAX—68 bbls, Carthaginian, Liverpool
BORAX—24 cks, Lake Huron, Liverpool
CREAM TARTAR—7 cks, Carthaginian, Liverpool
CREAM TARTAR—8 pkgs, Lake Huron, Liverpool
CREAM TARTAR—3 cks, Amarynthia, Glasgow
CHEMICALS—1 cs, Norwegian, Glasgow
CHALK—10 cks, Ormidale, London
COLOR—7 cks, Ormidale, London
DEXTRINE—100 bgs, Arabia, Hamburg
DRUGS—8 cks, Carthaginian, Liverpool
GYPSUM—100 kgs, Carthaginian, Liverpool
LOGWOOD EXT—20 cks, Amarynthia, Glasgow
LOGWOOD—100 bgs, Sarmatian, Glasgow
OIL, LINSEED—2 bbls, Carthaginian, Liverpool
OIL, LINSEED—15 bbls, Memnon, Bristol
OIL, LINSEED—50 bbls, Sarmatian, Glasgow
OIL, COD LIVER—10 bbls, Sarmatian, Glasgow
OIL, COD LIVER—10 bbls, Sarmatian, Glasgow
PHOSPHORUS—4 cks, Memnon, Bristol
POTASH, BICH—8 cks, Amarynthia, Glasgow
POTASH, CARB—2 cks, Arabia, Hamburg
POTASH, CAUSTIC—5 dms, Arabia, Hamburg
PITCH—450 bbls, Norwegian, Glasgow
PITCH—290 bbls, Sarmatian, Glasgow
PITCH—360 cks, Ormidale, London
SODA, CAUSTIC—100 dms, Carthaginian, Liverpool
HYPOSULP—18 bbls, Arabia, Hamburg
BICHROM—7 cks, Amarynthia, Glasgow
B C—14 cks, Norwegian, Glasgow
SODA, B—50 kgs, Carthaginian, Liverpool
SAL—96 bbls, Carthaginian, Liverpool
SODA—35 bbls, Carthaginian, Liverpool
SODIUM, SULPHATE—130 cks, Arabia, Ant
SOAP—123 bxs, Lake Huron, Liverpool
SULPHUR—34 cks, 300 bgs, Lake Ontario, Liverpool
VARNISH—3 cks, 10 cs, Lake Ontario, L'pool
WHITING—357 cks, 850 sks, Ormidale, Bristol

Halifax Imports.

BLEACH—17 cks, J L & D S Riker, Corean, Liverpool

EXPORTS FROM NEW YORK.

Week ending July 30.

ACID—6 cbgs, $21, Advance, Colon
MURIATIC—100 cbys, $192, John Paul, Havana
SULPHURIC—200 cbys, $365, John Paul, Havana
3 cbys, $11, Thuringin, Hayti
100 cbys, $106, Seneca, Havana
ALCOHOL—20 bbls, $220, C Burrill, Melbourne
30 bbls, $316, Altai, Greytown
AMMONIA—5 cyls, $155, Advance, Colon
10 cyls, $585, Concho, Havana
BARK EXTRACT—50 bbls, $500, Patria, Hamburg
CALCIUM CARBIDE—20 cs, 2 dms, $216, Westmeath, Hamburg
CANDLES—3 cs, $63, Santo Domingo, Havana
26 cs, $116, Advance, Colon
5 cts, $50, Thuringia, Hayti
35 cs, $108, Altai, Kingston
2 cs, $19, Altai, Savanilla
59 cs, $61, Philadelphian, P Cabello
4 cs, $7, Philadelphian, Curacoa
CARBON—50 bbls, $150, Mongolian, Glasgow
10 bbls, $100, Barbarossa, Bremen
20 bbls, $40, La Gascogne, Havre
25 bbls, $250, Spaarndam, Rotterdam
18 bbls, $80, C Burrill, Melbourne
CHEMICALS—26 cks, $3,191, Mobile, London
COPPER SULPHATE—44 bbls, $674, Patria, Hamburg
½ bbl, $7, Santiago de Cuba, Cuba
2 kgs, $4, Seneca, Frontera
2 bxs, $2, Philadelphian, Maracaibo
10 cs, $25, Philadelphian, La Guayra
DYEWOOD EXTRACT—12 bbls, 2 bxs, Kaiser Wilhelm II, Genoa
155 bxs, $619, Spaarndam, Rotterdam
1,010 bxs, $4,023, Patria, Hamburg
FLAXSEED—16,975 bu, $14,250, Michigan, London
GLUCOSE—50 bbls, $330, Michigan, London
350 bbls, $2,136, Exeter City, Bristol
60 bbls, $400, Bovic, Liverpool
90 bbls, $700, America, London
132 kgs, 50 bbls, 179 pkgs, $550, Mobile, London
525 bbls, $3,840, Aurania, Liverpool
300 bbls, $2,400, Llandaff City, Bristol
200 bbls, $1,409, Circassia, Glasgow
9 bbls, $70, C Burrill, Melbourne
GLUE—5 bls, $140, Santo Domingo, Havana
1 bbl, $14, Advance, Colon
5 bbls, $35, Seguranca, Havana
24 pkgs, $150, Spaarndam, Rotterdam
20 kgs, $97, Patria, Hamburg
5 cs, $34, C Burrill, Melbourne
3 bbls, $57, Seneca, Havana
20 bbls, $400, Rotterdam, Rotterdam
1 bbl, $20, Philadelphian, La Guayra
GRAPE SUGAR—500 bgs, $580, Michigan, London
850 bgs, $955, Exeter City, Bristol
250 bgs, $375, Bovic, Liverpool
250 bgs, $308, Mongolian, Glasgow
1,000 bgs, $1,130, Turquois, Cardiff
499 bgs, $644, Mobile, London
170 bxs, $175, C Burrill, Melbourne
lao
125 tcs, $1,500, Westmeath, Hamburg
112 tcs, $1,416, Pontiac, Trieste
56 tcs, $716, Spaarndam, Rotterdam
891 tcs, $12,162, Burgundia, Marseilles
300 tcs, 100 bbls, $3,621, Patria, H'burg
20 bbls, $128, Altai, Savanilla
5 tcs, 60 bbls, $759, Pontiac, Trieste
20 tcs, 25 bbls, $607, Seneca, Progreso
LUB—10 bbls, $347, New York, Southampton
7 bbls, $240, Berlin, Antwerp
1 cs, $5, Advance, Colon
577 kgs, $2,500, Condor, Talcahuano
100 bbls, $344, Condor, Coronel
32 bxs, $102, Condor, Callao
39 cs, $303, Coleridge, Rio Janeiro
46 cs, $97, A W Spies, Honolulu
2 bbls, $25, Portia, Halifax
4 bbls, $24, Salerno, Pernambuco
60 bbls, 600 cs, $2,816, Mobile, London
10 bbls, $40, K Wm II, Genoa
5 bbls, $67, Patria, Hamburg
3 bbls, $67, Circassia, Glasgow
5 cs, $12, Nellie Brett, Port Natal
60 bbls, 20 bxs, $1,023, C Burrill, Melbourne
300 cs, $668, Orari, Brisbane
4 tcs, $48, Philadelphia, Curacoa
GUM, CHICLE—28 bls, $1,250, C. Burrill, Melbourne
DAMAR—5 bbls, $315, Seneca, Vera Cruz
KAURI—1 cs, 2 cks, $480, Seneca, Havana
KALSOMINE—27 cs, $257, C Burrill, Melbourne
LAMPBLACK—1 bx, $10, Advance, Colon
5 cs, 2 bbls, $30, A W Spies, Honolulu
LEAD—2,240 pkgs, 215,443 lbs, $8,000, Anerley, Amsterdam
1,335 pigs, 128,938 lbs, $3,000, Adriatic, Liverpool
3,493 pigs, 336,133 lbs, $8,000, Bovic, L'pool
7,397 pigs, 672,088 lbs, $14,500, Patria, Hamburg
LIME, ACETATE—554 bgs, $780, Michigan, London
323 bgs, $550, Trave, Bremen
1,036 bgs, $1,693, Barbarossa, Vienna
442 bgs, $835, Westmeath, Hamburg
BORATE—2,599 bgs, $7,358, Bovic, Liverpool
MILK SUGAR—6 bbls, $70, Bovic, Liverpool
25 bbls, $724, Mobile, London
10 bbls, $150, Patria, Hamburg
OIL, CAKE—1,500 bgs, $4,060, New York, Southampton
794 bgs, $2,430, Anerley, Amsterdam
3,700 bgs, $10,583, Berlin, Antwerp
1,764 bgs, $4,765, Bovic, Liverpool
2,262 bgs, $6,900, Mongolian, Glasgow
1,916 bgs, $4,445, Burgundia, Marseilles
564 bgs, $1,690, Spaarndam, Rotterdam
700 bgs, $2,350, Colorado, Hull
CASTOR—2 bbls, $92, Philadelphian, La Guayra
COD LIVER—50 bbls, $790, Mobile, London
CORDAGE—36 bbls, $213, Celeste Burrill, Melbourne
CORN—20 bbls, $222, Prussia, Hamburg
120 bbls, $1,331, Bovic, Liverpool
60 bbls, $640, Etruria, Liverpool
COTTONSEED—350 bbls, $5,000, Prussia, Hamburg
½ bbl, $8, Santo Domingo, Havana
100 bbls, $1,605, Condor, Valparaiso
400 bbls, $6,175, Burgundia, Marseilles
100 cs, 20 bbls, $530, Coleridge, Bahia
100 bbls, $1,660, Panama, Bordeaux
320 bbls, $4,501, Pontiac, Trieste
281 bbls, $4,376, Burgundia, Marseilles
30 bbls, $379, Salerno, Rio Janeiro
50 bbls, $900, Mobile, London
251 bbls, $2,500, Colorado, Hull
50 bbls, $650, Sarnia, Leghorn
20 bbls, $285, C Burrill, Melbourne
55 cs, 22 bbls, $457, Altai, Kingston
24 bbls, $285, Seneca, Progreso
550 bbls, $7,715, Pontiac, Trieste
10 bbls, $140, Dunstan, Barbadoes
CYLINDER—10 bbls, $52, Advance, Colon
1 bbl, $23, Seneca, Progreso
ENGINE—20 cs, $144, Vega, Massamede
20 cs, $124, Vega, Lisbon
ESSENTIAL—3 cs, $348, Burgundia, Marseilles
FISH—2 cs, $6, Saginaw, Porto Plata
1 cs, $2 Altai, Kingston
LAVENDER—1 cs, $19, La Gascogne, Havre
LARD—125 bbls, $3,372, Georgic, Liverpool
1 bbl, $28, Advance, Colon
750 cs, $3,150, Condor, Antofagasta
10 bbls, $194, Condor, Callao
50 bbls, $846, Manila, Barcelona
25 bbls, $556, Bovic, Liverpool
55 bbls, $880, Mobile, London
4 bbls, $78, Philadelphia, Maracaibo
LINSEED—27 cs, $120, Advance, Colon
3 cs, $4, Thuringia, Hayti
1 cs, $3, Philadelphia, Curacoa
1 bbl, $17, Philadelphia, La Guayra
LUB—120 bbls, $850, K Wm II, Genoa
3 bbls, $28, Philadelphia, P Cabello
1 cs, $5, Philadelphia, Curacoa
185 bbls, $925, Anerley, Amsterdam
25 bbls, 16 cs, $128, Berlin, Antwerp
1 bbl, 44 cs, $132, Advance, Colon
35 bbls, $300, La Gascogne, Havre
60 bbls, $400, Thingvalla, Copenhagen
38 bbls, $735, Aurania, Liverpool
100 bbls, $500, Westmeath, Hamburg
192 bbls, 100 cs, $1,499, Coleridge, Rio Janeiro
1,525 bbls, $7,125, Bovic, Liverpool
635 bbls, $3,175, Exeter City, Bristol
40 bbls, $200, Stefano Repetto, Limerick
190 bbls, $1,750, Mongolian, Glasgow
58 bbls, $638, Panama, Bordeaux
25 bbls, $650, Remus, Singapore
181 bbls, $912, Vega, Lisbon
1 cs, $4, Vega, Fayal
70 bbls, $283, Tauric, Liverpool
15 bbls, $60, A W Spies, Honolulu
½ bbl, $9, Thuringia, Hayti
75 bbls, 100 cs, Alex Gibson, Yokohama
3,475 bbls, $17,500, La Gascogne, Havre
790 bbls, $4,251, Burgundia, Marseilles
165 bbls, $925, Spaarndam, R'dam
6 bbls, $79, Salerno, Pernambuco
17 bbls, $192, Portia, St Johns
20 bbls, $190, Portia, Halifax
5 bbls, $15, Thingvalla, Christiania
30 bbls, $175, Thingvalla, Gothenburg
1,605 bbls, $7,875, Mobile, London
750 bbls, $3,750, Colorado, Hull
45 bbls, $750, Aurania, Liverpool
869 bbls, $7,426, Kaiser Wm II, Genoa
10 bbls, $80, Westmeath, Alexandria
895 bbls, $5,700, Patria, Hamburg
25 bbls, $200, Llandaff City, Bristol
300 cs, $334, Concho, Tampico
385 bbls, $4,940, Sarnia, Genoa
38 bbls, 413 cs, $1,075, Jno S Emery, Buenos Ayres
220 cs, $895, Nellie Brett, Port Natal
60 bbls, $1,475, Orari, Brisbane
136 cs, 890 bbls, $10,702, C Burrill, Melbourne
60 bbls, $300, Pontiac, Trieste
70 bbls, $350, Pontiac, Venice
57 bbls, $508, Dunstan, Para
6 cs, $26, Philadelphia, La Guayra
MEAL—1,900 bgs, $2,660, Danstan, Barbadoes.
MIN'L COLZA—100 bbls, $500, Burgundia, Marseilles
500 bbls, $2,500, Mobile, London
40 bbls and 300 cs, $800, K Wm II, Genoa
250 bbls, $1,250, Llandaff City, Bristol
OLEO—1,945 tcs, $38,747, Spaarndam, R'dam
290 tcs, $5,00, Thingvalla, Copenhagen
60 tcs, $1,050, Thngvalla, Christiania
65 tcs, $1,770, Mobile, London
2,335 tcs, $50,902, Patria, H'b'g
OLIVE—5 bbls, $136, C Burrill, Melbourne
PEP—25 cs, $390, Mobile, London
SEWING MACH—20 cs, $50, Santo Domingo, Vera Cruz
56 cs, $172, Advance, Colon
50 cs, $112, Condor, Antofagasta
10 cs, $25, Orari, Brisbane
SPERM—3 cs, $15, Lahn, Bremen
TAR—3 bbls, $26, A W Spies, Honolulu
PAINT—7 pkgs, $85, Seneca, Vera Cruz
2 bbls, $120, New York, Southampton
1 cs, $15, Santo Domingo, Havana
13 cs, $253, Santo Domingo, Barcelona
1 kg, $10, Berlin, Ant
38 pkgs., $467, Advance, Colon
6 pkgs., $241, Condor, Talcahuano
10 bbls, $155, La Gascogne, Havre
1 cs, $14, Vega, Lisbon
152 cs, $700, A W Spies, Honolulu
8 cs, $36, Seguranca, Tampico
2 cs, $18, Seguranca, Havana
58 cs, $171, Spaarndam, Amsterdam
11 cs, $160, Thingvalla, Stettin
13 pkgs, $98, Portia, Halifax
4 pkgs, $56, Portia, St Johns
6 cs, $75, Aurania, L'pool
2 cs, $43, Kaiser Wm II, Genoa
1 cs, $15, Westmeath, H'b'g
4 cs, $92, C Burrill, Melbourne
14 pkgs, $75, Altai, Kingston
3 pkgs, $26, Altai, Savanilla
3 pkgs, $22, Altai, Greytown
3 cs, $32, Santiago, Cuba
6 kgs and 1 cs, $65, Pontiac, Lamsoua
1 cs, $8, Douglas, Mauritius
3 cs, $12, Seneca, Havana
18 pkgs, $193, Seneca, Campeche
3 pkgs, $35, Dunstan, Ceara
19 pkgs, $211, Philadelphian, Maracaibo
8 pkgs, $47, Philadelphian, Curacoa
PETROLEUM—(See Petroleum Clearances on page 22)
PETROLEUM JELLY—240 cs, $7,274, Westmeath, Hamburg
20 bbls, $285, Mobile, London
PITCH—50 bbls, $92, Condor, Valparaiso
1 bbl, $3, Thuringia, Hayti

KRYOFIN U.S. Patent. A new powerful, antipyretic and antineuralgic.
SOLE AGENTS:
C. BISCHOFF & CO.
87–89 PARK PLACE, NEW YORK.

POTASH—1 ck, $23, Santo Domingo, Havana
ROSIN—6 bbls, $12, Santo Domingo, Havana
600 bbls, $1,936, Condor, Valparaiso
1,060 bbls, $4,133, Great Admiral, Rio Janeiro
221 bbls, $824, Bovic, Liverpool
734 bbls, $1,600, Mongolian, Glasgow
200 bbls, $638, Hermes, Rio Grande do Sul
20 bbls, $49, H P Simpson, Las Palmas
100 bbls, $373, A W Spies, Honolulu
300 bbls, $978, Salerno, Rio Janeiro
3 bbls, $13, Portia, Halifax
150 bbls, $566, Holstein, Cape Hayti
2 bbls, $8, Nellie Brett, Port Natal
1,200 bbls, $1,800, Circassia, Glasgow
15 bbls, $40, C. Burrill, Melbourne
40 bbls, $147, Altai, Savanilla
15 bbls, $64, Altai, Kingston
6 bbls, $24, Seneca, Tuxpam
2 bbls, $4, Seneca, Havana
30 bbls, $63, Dunstan, Para
10 bbls, $39, Philadelphian, Curacoa
210 bbls, $695, Philadelphian, Maracaibo
SARSAPARILLA—5 bls, $275, Burgundia, Marseilles
SOAP—60 cs, $150, Kaiser Wm II, Genoa
1 cs, $18, Santo Domingo, Progreso
3 cs, $6, Advance, Colon
2 cs, $70, Condor, Arica
259 cs, $576, Condor, Valparaiso
1 cs, $87, Trave, Bremen
481 cs, $1,900, Bovic, Liverpool
82 cs, $160, Coleridge, Rio Janeiro
65 cs, $213, A W Spies, Honolulu
924 bxs, $470, Thuringia, Hayti
1 kg, $20, F Bismarck, Hamburg
25 cs, $60, Portia, St Johns
20 cs, $60, Portia, St Johns
20 cs, $60, Portia, Halifax
1,175 bxs, $3,200, Mobile, London
1 cs, $100, Circassia, Glasgow
16 cs, $1,435, C Burrill, Melbourne
104 cs, $582, Orari, Brisbane
7 cs, $53, Altai, Kingston
160 cs, $857, Altai, Savanilla
54 cs, $34, Santiago, Cuba
2 cs, $5, Seneca, Havana
222 cs, $288, Dunstan, Para
101 cs, $186, Philadelphian, Curacoa
101 cs, $312, Philadelphian, Maracaibo
SODA, BICARB—30 kgs, $76, Santo Domingo, Havana
CAUSTIC—5 dms, $95, Altai, Savanilla
9 dms, $172, Seneca, Mexico
SILICATE—25 tcs, $155, Philadelphian, Maracaibo
STARCH—50 bxs, $53, Santo Domingo, Havana
500 bgs, $1,500, Mongolian, Glasgow
4 bxs, $5, Vega, Fayal
190 bxs, $415, A W Spies, Honolulu
200 bgs, $524, Spaarndam, Amsterdam
250 bgs, $780, Mobile, London
100 bgs, $300, K Wm II, Genoa
250 bgs, $700, Llandaff City, Bristol
7 bxs, $12, Nellie Brett, Port Natal
22 bxs, $30, Altai, Kingston
1 bx, $2, Seneca, Havana
65 bxs, $129, Philadelphian, P. Cabello
1 cs, $2, Philadelphian, Curacoa
STEARINE—1,000 tcs, $16,000, Burgundia, Marseilles
1 bg, $6, Altai, Savanilla
TALC—480 bgs, $375, Panama, Bordeaux
TALLOW—2 bbls, $41, Advance, Colon
6 tcs, $95, Condor, Mollendo
120 bbls, 20 hhds, $2,670, Westmeath, Hamburg
200 tcs, $4,190, Coleridge, Bahia
11,419 lbs, $599, Veendam, Rotterdam
60 tcs, $1,315, Spaarndam, Rotterdam
2,445 tcs, 100 hhds, $35,140, Burgundia, Marseilles
400 tcs, $4,572, Holstein, Cape Hayti
60 tcs, $900, Patria, Hamburg
20 hhds, $742, Sarnia, Leghorn
25 tcs, $450, Circassia, Glasgow
20 tcs, $277, Altai, Kingston
70 bbls, $1,319, Altai, Savanilla
1 cs, $2, Philadelphian, La Guayra
TANNING EXT—25 bbls, $375, Westmeath, Hamburg
TAR—3 cs, $7, Santo Domingo, Vera Cruz
12 bbls, $44, Condor, Talcahuano
20 bbls, $69, H P Simpson, Las Palmas
½ bbl, $2, Thuringia, Hayti
20 bbls, $40, Portia, St Johns
20 cs, $28, Santiago, Cuba
3 bbls and 2 cs, $13, Seneca, Havana
COAL—1 bbl, $3, Thuringia, Hayti
TURPENTINE—2 cs, $7, Santo Domingo, Vera Cruz
31 cs, $118, Advance, Colon
200 cs, $598, Condor, Callao
1,270 cs, $4,053, Condor, Valparaiso
700 cs, $2,304, Great Admiral, Rio Janeiro
1 cs, $2, Saginaw, P Plata
105 cs, $322, A W Spies, Honolulu
3 cs, $6, Thuringia, Hayti
35 cs, $153, Nellie Brett, Port Natal
800 cs, $2,480, C Burrill, Melbourne
2 cs, $7, Altai, Kingston
1 cs, $3, Altai, Savanilla
300 cs and 35 bbls, $1,271, Pontiac, Venice
20 cs, $52, Seneca, Havana
52 cs, $181, Dunstan, Para
1 bbl and 12 cs, $55, Philadelphian, P Cabello
VARNISH—3,000 gls., $2,400, Michigan, London
200 gls, $150, Berlin, Antwerp
155 gls, $470, Santo Domingo, Barcelona
38 gls, $41, Advance, Colon
510 gls, $555, Condor, Iquique
80 gls, $74, Condor, Callao
350 gls, $420, Bovic, Liverpool
10 gls, $8, Coleridge, Rio Janeiro
70 gls, $96, A W Spies, Honolulu
100 gls, $106, Seguranca, Havana
200 gls, $586, Spaarndam, R'dam
40 gls, $65, Mobile, London
35 gls, $107, K Wm II, Genoa
20 gls, $96, Patria, Hamburg
400 gls, $407, Nellie Brett, Port Natal
31 gls, $64, Altai, Kingston
32 gls, $24, Altai, Savanilla
40 gls, $58, Santiago, Cuba
60 gls, $40, Seneca, Havana
24 gls, $24, Dunstan, Para
50 gls, $33, Philadelphian, La Guayra
WAX, BEE'S—3 bbls, 10 ser, $1,096, Patria, Hamburg
PARAFFINE—100 bbls, $544, Santo Domingo, Vera Cruz
6 cs, $55, Portia, Halifax
300 cs, $2,560, Bovic, Liverpool
100 bbls, $700, Mongolian, Glasgow
1,000 bbls, $8,500, Mississippi, London
820 bbls, $9,935, Mobile, London
350 bgs, 100 bbls, $4,150, Patria, Hamburg
44 bgs, $440, Kaiser Wm II, Genoa
150 cs, $1,500, Llandaff City, Bristol
800 cs, $7,560, C Burrill, Melbourne
30 bbls, 367 bgs, $4,070, Pontiac, Venice
200 bgs, $2,000, Pontiac, Trieste
200 bgs, $1,145, Seneca, Progreso
WHITE LEAD—80 bbls, $420, Advance, Colon
WOOD FILLER—3 bbls, $70, Circassia, Glasgow
ZINC, OXIDE—445 bbls, $2,365, Westmeath, Hamburg
150 bbls, $966, Bovic, Liverpool
200 bbls, $1,288, Mobile, London
3 bbls, $37, Philadelphia, La Guayra

Boston Exports.

ACID, LACTIC—20 bbls, Chicago, Hull
GLUCOSE—100 bbls, Victorian, Liverpool
GRAPE SUGAR—1,000 bgs, Victorian, L'pool
750 bgs, Oriel, London
GREASE—1 bbl, Boston, Yarmouth
3 bbls, 3 hf bbls, St Croix, St John, N B
OIL, LARD—6 bbls, Olivette, Halifax
50 bbls, Oriel, London
LUB—26 bbls, Olivette, Halifax
2 bbls, Halifax, Halifax
50 bbls, Oriel, London
OLEO—50 tcs, Olivette, Halifax
MIN'L SPERM—50 bbls, Victorian, L'pool
PAINT—6 cs, Pro Patria, St Pierre
3 cs, Boston, Yarmouth
22 pkgs, Oriel, London
SOAP—3 bxs, Olivette, Halifax
50 cs, Yumuri, Bocas del Toro
STARCH—16 bbls, Oriel, London
5 bbls, St Croix, St John, N B
WAX, BEES'—11 bxs, Victorian, L'pool

Philadelphia Exports.

CAKE PITCH—600 bbls, Asturia, Hamburg
GLUE—15 bbls, Snowflake, London
GREASE—20 tcs, Waesland, L'pool
PETRO—195 bbls and 40 cks, Waesland, L'pool
OIL CAKE—1,517 bgs, Pennsylvania, Ant
800 bgs, Waesland, L'pool
LUB—735 bbls, Pennsylvania, Ant
1,120 bbls, Asturia, Hamburg
600 bbls, Waesland, Liverpool
225 bbls and 2,450 cs, Puritan, Hiogo
PAINT—10 bbls, Snowflake, London
STARCH—300 bgs, Pennsylvania, Ant
TALLOW—300 tcs, Pennsylvania, Ant
25 tcs, Asturia, Hamburg
109 tcs, Waesland, L'pool
WAX, PAR—605 bgs, 39 cs and 100 bbls, Asturia, Hamburg
50 cs, Puritan, Hiogo

Baltimore Exports.

BARK, QUERCITRON—110,000 lbs, Dresden, Bremen
44,688 lbs, Lord Erne, London
56,000 lbs, Massapequa, Havre
EXTRACT—16,627 lbs, Orthia, Glasgow
CANDLES—3 bxs, Sarah E Douglas, Tarpun Bay
CARBON—200 bbls, Norse King, Antwerp
COPPER SULPHATE—22,750 lbs, Venango, R'dam
GRAPE SUGAR—111,888 lbs, Lord Erne, London
GREASE—4,000 lbs, Massapequa, Havre
OCHER—56,000 lbs, Massapequa, Havre
OIL CAKE—1,596,758 lbs, Norse King, Ant
1,298,447 lbs, Ikbal, L'pool
671,539 lbs, Lord Erne, London
337,859 lbs, Venango, R'dam
1,413,965 lbs, Massapequa, Havre
CORN—33,000 gls, Norse King, Ant
60 bbls, Venango, R'dam
20,550 gls, Orthia, Glasgow
LARD—3,750 gls, Orthia, Glasgow
LUB—3,750 gls, Massapequa, Havre
OLEO—773,231 lbs, Venango, R'dam
PHOSPHORUS—1,900 lbs, Orthia, Glasgow
ROSIN—912 bbls, Dresden, Bremen
SOAP—8 bxs, Sarah E Douglas, Tarpun Bay
5,000 lbs, Franklin, Port Antonio
STARCH—56,000 lbs, Ikbal, L'pool
97,500 lbs, Venango, R'dam
SASSAFRAS ROOT—5 tons, Dresden, Bremen
STEARINE—42,600 lbs, Massapequa, Havre
94,647 lbs, Lord Erne, London
TALLOW—39,387 lbs, Ikbal, L'pol
WAX, PAR—55,620 lbs, Ikbal, L'pool
31,900 lbs, Orthia, Glasgow

Charleston Exports.

ROSIN—3,602 bbls, Æolus, Middlesborough, England

Savannah Exports.

ROSIN—7,150 bbls, $16,361, Undal, Rotterdam
8,000 bbls, $19,127, Parthenope, Rotterdam
TURPENTINE—1,450 cks, $18,085, Parthenope, Rotterdam

New Orleans Exports.

CANDLES—130 bxs, Albert Dumois, Port Limon
GREASE—100 bbls, Persian Prince, Marseilles
OIL—2 bbls, Albert Dumois, P Limon
55 cs, Prof Morse, Cuba
10 bbls, Habil, Bluefields
COTTONSEED—200 bbls, Australia, Bremen
2,250 bbls, Persian Prince, Marseilles
SOAP—101 bxs, Albert Dumois, Port Limon
40 bxs, Prof Morse, Cuba
150 bxs, Fulton, Bluefields
STARCH—25 bgs, Albert Dumois, Port Limon
TALLOW—86 bbls, Persian Prince, Genoa

San Francisco Exports.

ACID—1 pkg, $1, Orizaba, Mexico
6 pkgs, $179, R P Rithet, Honolulu
AMMONIA—6 cs, $300, Gallic, Japan
5 pkgs, $177, Orizaba, Mexico
AXLE GREASE—3 pkgs, $26, Tropic Bird, Tahiti
25 pkgs, $38, Orizaba, Mexico
5 pkgs, $55, R P Rithet, Honolulu
CANDLES—5 cs, $96, Tropic Bird, Tahiti
17 cs, $73, Santiago, Hilo
235 cs, $409, Orizaba, Mexico
FERTILIZER—100 tons, $3,004, J D Spreckles, Mahukona
944,832 lbs, $17,141, Santiago, Hilo
1,215 tons, $15,463, R P Rithet, Honolulu
GINSENG—484½ lbs, $1,600, Gaelic, China
LEAD—102,820 lbs, $5,303, Gaelic, Japan
OIL, LUB—9 pkgs, $43, Umatilla, Victoria
LINSEED—5 pkgs, $89, R P Rithet, Honolulu
5 pkgs, $20, Santiago, Hilo
2 pkgs, $9, Sharpshooter, Caroline Islands
1 pkg, Morning Star, Micronesia
12 pkgs, $53, Tropic Bird, Marquesas
MEAL—36 bgs, $40, R P Rithet, Honolulu
PAINT—1 pkg, $38, City of Puebla, Victoria
1 pkg, $5, Jeanie, Herschel Island
42 pkgs, $230, Tropic Bird, Tahiti
15 pkgs, $250, Morning Star, Micronesia
22 pkgs, $48, Lurline, Kahului
8 pkgs, $59, Sharpshooter, Caroline Islands
1 pkg, $9, Walla Walla, Victoria
4 pkgs, $29, Gaelic, Japan
28 pkgs, $64, Santiago, Hilo
95 pkgs, $375, Orizaba, Mexico
QUICKSILVER—3 flasks, $126, Walla Walla, Victoria
110 flasks, $6,140, Orizaba, Mexico
SOAP—17 bxs, $70, Jeanie, Herschel Island
129 bxs, $193, Tropic Bird, Tahiti
20 bxs, $28, Tropic Bird, Marquesas
2 bxs, $14, Lurline, Kahului
15 bxs, $60, Sharpshooter, Caroline Islands
20 bxs, $100, Gaelic, Japan
58 bxs, $156, Santiago, Hilo
2 bxs, $2, Orizaba, Mexico
1,000 cs, $3,500, R P Rithet, Honolulu
STARCH—8 pkgs, $13, Jeanie, Herschel Island
30 pkgs, $98, Lurline, Kahului
31 pkgs, $62, Santiago, Hilo
33 pkgs, $62, Orizaba, Mexico
TALLOW—2,400 lbs, $777, Orizaba, Mexico
TAR—10 cs, $13, Orizaba, Mexico
2 bbls, $23, Lurline, Kahului
TURPENTINE—4 pkgs, $24, Orizaba, Mexico
45 pkgs, $213, Umatilla, Victoria
1 cs, $3, Sharpshooter, Caroline Islands
10 cs, $39, Lurline, Kahului
1 cs, $4, Tropic Bird, Marquesas
1 pkg, $43, Tropic Bird, Tahiti

NEW YORK DOMESTIC RECEIPTS.

Week ending July 29.

ALCOHOL—235 bbls, Nat'l Dist. Co, P R R
65 bbls, Ind List Co, B & O R R
130 bbls, J A Webb & Son, B & O R R
129 bbls, F O Boyd & Co, B & O R R
455 bbls, Am Dist Co, D, L & W R R
WOOD—293 bbls, W S Gray, H R R R
BEESWAX—5 bgs, 24 bbls, order, O D S S Co
11 bbls, forward, Wilmington
1 bx, order, New Orleans
BLEACH—151 bbls, Cushman Bros & Co, H R R R
BARYTES—241 bbls, J W Masury & Co, O D S S Co
30 bbls, forward, O D S S Co
25 bbls, B Moore & Co, O D S S Co
BORAX—532 bgs, Pacific C B Co, New Orleans
1,540 bgs, Pacific C B Co, Galveston
CARBON—20 bbls, order, P R R
CLAY—783 bgs, 100 cks, order, Savannah
1,307 bgs, forward, Jacksonville
1,294 bgs, Owl C Co, Jacksonville
90 cks, R McNamee & Co, Charleston
16 cks, G Hamilton, Charleston
50 cks, forward, Charleston
COTTONSEED MEAL—2,200 bgs, order, Savannah
FLAXSEED—34,159 bu, Nat'l Lead Co, Canal Boats
GLASS, WINDOW—524 cs, P Semner G Co, W S R R
GLUE—13 bgs, order, H R R R
31 bgs, Milligan & H Glue Co, H R R R
GLUCOSE—86 bbls, Wm Schwoenker, B & O R R
150 bbls, Am Glucose Co, D, L & W R R
60 bbls, Hudson Mfg Co, D, L & W R R
73 bbls, 22 hf bbls, 80 kgs, United Conf Assn, D, L & W R R
210 bbls, B H Howell, B & O R R
50 bbls, W D Hoag, B & O R R
50 bbls, Walden & B, L V R R
40 bbls, 30 kgs, Wood & Selick, D, L & W R R
50 bbls, T D Anderson, B & O R R
GREASE—121 bbls, order, C R R of N J
12 bbls, export, P R R
63 bbls, A L Knight & Co, P R R
105 bbls, export, E R R
65 tcs, E Volk, P R R
3 kgs, order, H R R R
GRAPE SUGAR—500 bgs, R W Forbes & Co, P R R
HIGHWINES—66 bbls, Cook & B, H R R R
160 bbls, Lanman & K, P R R
30 bbls, W Stern, P R R
200 bbls, Nat'l Dist Co, P R R
57 bbls, F O Boyd & Co, B & O R R
IRON OXIDE—20 bbls, B P Ducas & Co, L V R R
LEAD—7,458 pigs, order, O D S S Co
LYE—1,780 cs, forward, W S R R
50 cs, Cushman Bros, H R R R
50 cs, order, W S R R
MILK SUGAR—20 bbls, order, H R R R
MUSTARD SEED—2 bgs, order, Galveston
OIL CAKE—1,656 bgs, Munn & J, Canal Boats
408 bgs, Gilbert & G, P R R
312 bgs, Hately Bros, B & O R R
243 bgs, I & C Moore & Co, E R R
3,596 bgs, export, E R R
320 bgs, export, H R R R
340 bgs, Elbert & G, H R R R
365 bgs, I & C Moore & Co, P R R
COTTONSEED—1,750 bbls, order, Savannah
2,250 bbls, Am Cotton Oil Co, New Orleans
250 bbls, export, New Orleans
1 car, Central Lard Co, P R R
CORN—180 bbls, export, H R R R
FUSEL—7 bbls, F O Boyd & Co, B & O R R
FISH—10 bbls, order, O D S S Co
LARD—5 bbls, M Frankfort, B & O R R
3 cars, Central Lard Co, H R R R
LINSEED—63 bbls, Leonard & B, P R R
LUB—150 bbls, Hollister & C, B & O R R
4 bbls, order, B T Co
60 bbls, Macy & D, H R R R
126 bbls, J Wild & Co, P R R
15 bbls, T R Bagot, H R R R
60 bbls, W McDonough, E R R
15 bbls, order, C R R of N J
OLEO—2,495 tcs, export, W S R R
150 tcs, export, P R R
25 tcs, export, B & O R R

J. L. & D. S. RIKER

46 CEDAR STREET, NEW YORK

IMPORTERS AND MANUFACTURERS' AGENTS

SOLE AGENTS FOR THE UNITED STATES & CANADA

of THE UNITED ALKALI CO., Limited of Great Britain

FOR THE SALE OF THEIR VARIOUS BRANDS OF

Bleaching Powder

Crude Drug Department

PARKE, DAVIS & CO.,

Offices, 90, 92, 94 Maiden Lane. Warehouses, 9 & 11 Cedar St.

NEW YORK.

New Norwegian Cod Liver Oil

This is Our Brand.

Gum Asafœtida PURE Uncolored P. D. & Co. INSECT POWDER Coca Leaves

JAPANESE CAMPHOR, GUM SENEGAL

ALEXANDRIA and TINNEVELLY SENNA.

60 tcs, export, E R R
ROSIN—50 bbls, order, Savannah
PAINT—67 bbls, 60 kgs, Bass Paint Co, L V R R
33 cs, 62 bbls, order, B T Co
POTASH—18 bbls, order, B I L
2 bbls, order, P R R
35 bbls, order, H R R R
ROSIN—4,752 bbls, various, Savannah
87 bbls, Tolar, H & Co, O D S S Co
230 bbls, Baily & M, O D S S Co
94 bbls, forward, O D S S Co
250 bbls, order, O D S S Co
295 bbls, W J Keenan, O D S S Co
360 bbls, Tolar, H & Co, Georgetown
498 bbls, Baily & M, Georgetown
69 bbls, S P Shotter Co, O D S S Co
131 bbls, Baily & M, Brunswick
71 bbls, Tolar, H & Co, Brunswick
1,650 bbls, Paterson, D & Co, Brunswick
160 bbls, W K Hinman, O D S S Co
190 bbls, Baily & M, Jacksonville
45 bbls, Pitts Bros, Jacksonville
488 bbls, Baily & M, Charleston
SOAP—66 bxs, A Jergens, B & O R R
175 bbls, Halbroar Mfg Co, B & O R R
60 bxs, forward, W S R R
10 bbls, 550 bxs, order, P R R
SODA—375 bgs, B T Babbitt, H R R R
9 bbls, order, B T Co
ASH—80 bgs, Wing & Evans, H R R R
150 bgs, Arnold, Peck & Co, O D S S Co
BICARB—1,110 cs, 225 kgs, Church, D & Co, H R R R
80 bbls, E H Embree, P R R
CAUSTIC—300 dms, B T Babbit, H R R R
8 bbls, E H Embree, P R R
STARCH—243 bbls, 1,385 bxs, 100 cts, Oswego Starch Co, D, L & W R R
200 bgs, C Morningstar, P R R
150 cs, order, B T Co
800 bxs, Nat'l Starch Co, P R R
17 bxs, order, P R R
600 bxs, R C Williams, L V R R
STEARINE—50 tcs, export, W S R R
49 bgs, export, P R R
80 tcs, W J Wilcox Ref Co, W S R R
120 tcs, D C Link, H R R R
SUMAC—280 bgs, order, O D S S Co
EXT—50 bbls, N Y & B D E Co, B & O R R
TALLOW—70 bbls, order, C R R of N J
7 bbls, order, L V R R
27 bbls, Davis Oil Co., O D S S Co
688 bbls, 225 tcs, export, H R R R
2 bbls, order, N Y, Ont & W R R
60 hhds, W D Vandenhove & Co, E R R
14 bbls, order, W S R R
TALC—30 cs, export, Jacksonville
TAR—14 bbls, Tolar, H & Co, Georgetown
58 bbls, C A Woolsey & Co, Wilmington
15 bbls, forward, Wilmington
50 bbls, J A Casey, Wilmington
25 bbls, H Louderbough, Wilmington
30 bbls, F M Blossom, Wilmington
12 bbls, H J Hayne, O D S S Co
27 bbls, Tolar, H & Co, O D S S Co
TURPENTINE—113 bbls, Baily & M, O D S S Co
8 bbls, C B Turton, O D S S Co
84 bbls, Tolar, H & Co, O D S S Co
1,391 bbls, various, Savannah
4 bbls, forward, O D S S Co
228 bbls, Baily & M, Georgetown
300 bbls, Tolar, H & Co, Georgetown
100 bbls, forward, Wilmington
51 bbls, W J Keenan, Wilmington
29 bbls, Tolar, H & Co, Wilmington
60 bbls, Baily & M, Wilmington
100 bbls, M W Larendon, Wilmington
83 bbls, F W Blossom, Wilmington
80 bbls, F L Clark, Wilmington
300 bbls, Paterson, D & Co, Wilmington
10 bbls, Welch, H & Co, Wilmington
13 bbls, C A Woolsey Co, Wilmington
6 cars, Standard Oil Co, P R R
50 bbls, M W Larendon, Jacksonville
200 bbls, Paterson, D & Co, Jacksonville
22 bbls, Tolar, H & Co, Brunswick
200 bbls, Paterson, D & Co, Brunswick
200 bbls, Pratt Works, Brunswick
25 bbls, W K Hinman, O D S S Co
54 bbls, Baily & M, Jacksonville
17 bbls, Pitts Bros, Jacksonville
200 cks, Paterson, D & Co, Charleston
CRUDE—5 bbls, forward, Wilmington
VARNISH—64 cs and 5 bbls, Bulman, W & Co, O D S S Co
WHALEBONE—17 bls, forward, New Orleans
WHITE LEAD—61 kgs, order, Galveston

Total Domestic Receipts.

At New York for week ending July 29, 1897.

		For Week.	Since Jan. 1.
Alcohol	bbls	1,014	3,922
Beeswax	pkgs	41	283
Boneblack	bgs	20	3,191
Borax	bgs	2,072	64,869
Borax	bbls	....	220
Brimstone	bgs	....	5,366
Cotton seed	bgs	....	332
Ashes	bgs	....	2,743
Cake	bgs	....	5,860
Hulls	bgs	....	....
Meal	bgs	2,200	9,265
Flaxseed	bush	34,159	1,476,802
Glue	pkgs	44	675
Glucose	bbls	820	41,263
Grease	pkgs	369	25,730
Highwines	bbls	513	31,794
Lead	pigs	7,458	312,552
Mustard seed	bgs	2	9,612
Oil, cake	bgs	7,330	252,262
Cottonseed	bbls	4,310	130,334
Fish	bbls	10	510
Lard	bbls	185	2,474
Lubricating	bbls	438	6,671
Sperm	bbls	....	700
Whale	bbls	....	562
Oleo, stock	tcs	2,730	72,298
Pitch	bbls	....	3,366
Quicksilver	flks	....	3,770
Rosin	bbls	8,770	154,397
Soap stock	bbls	....	3,393
Spelter	pcs	....	56,227
Sponges	bls	....	437
Starch	pkgs	3,495	48,694
Stearine	pkgs	290	12,934
Sumac	bgs	280	1,312
Tallow	pkgs	1,093	38,109
Tar	bbls	231	15,802
Turpentine, crude	bbls	5	651
Spirits	bbls	4,282	54,479

Boston Domestic Receipts.

Week ending July 29.

CLAY—75 cks, Charleston
GREASE—1,516 bbls
TALLOW—152 bbls, 78 tcs, 25 pkgs
TURPENTINE—25 cks, Charleston

Baltimore Domestic Receipts.

Week ending July 28.

CLAY—67 cks, 530 bgs, Savannah
OIL, ROSIN—142 bbls, Savannah
PITCH—95 cks, Savannah
ROSIN—2,524 bbls, Savannah
TURPENTINE—125 cks, Savannah

Wilmington Domestic Receipts.

Week ending July 28.

ROSIN—2,930 bbls
TAR—477 bbls
TURPENTINE—1,161 cks
CRUDE—270 bbls

Charleston Domestic Receipts.

Week ending July 28.

ROSIN—421 bbls
TURPENTINE—108 cks

Savannah Domestic Receipts.

Week ending July 28.

CLAY—32 cks, 3 cars
COTTONSEED MEAL—2 cars
OIL, COTTONSEED—750 bbls
PHOSPHATE—1 car
ROSIN—13,160 bbls
TURPENTINE—5,693 cks

New Orleans Domestic Receipts.

Week ending July 28.

ALCOHOL—25 bbls
BONES—4 cars
BORAX—1,351 bgs
COTTONSEED—6,360 bgs, 4 cars
CAKE—1 car
HULLS—2 cars
MEAL—1,838 bgs, 1 car
FERTILIZER—22 cars
GLASS—1 car
GLUCOSE—350 bbls
LEAD—240 pigs
NAPHTHA—4 cars
OIL—18 bbls
COTTONSEED—172 bbls, 28 cars, 1 tank
PHOSPHATE—3 cars
ROSIN—1,381 bbls, 2 cars
SOAP—1 car
STOCK—1 car
STARCH—625 bxs, 2 cars
TURPENTINE—890 bbls, 1 car
WHITE LEAD—28 kgs, 1 car

TOTAL IMPORTS AT NEW YORK.

In the following table we give the total imports in packages, unless otherwise specified, and their value, at the port of New York for week ending July 30, 1897:

	Quantity.	Value.
Bottles	....	$3,915
Glass, plates	52	4,901
Glass, window	2,399	2,802
L. G. plates	136	11,924
Arsenic	134	2,486
Acid, boracic	30	1,129
Acid, citric	7	77
Acid, oxalic	45	2,347
Acid, all other	229	6,801
Aniline colors	561	28,511
Aniline salt	192	9,069
Ammonia carbonate	8	191
Ammonia sal	2	48
Argols	445	13,383
Albumen	53	3,482
Alizarine	82	4,875
Asphalt	....	15,627
Balsam copaiba	39	989
Balsam, all other	10	1,942
Bark, cinchonidia	30	452
Bark, all other	16	155
Bay rum	27	1,193
Bay leaves	34	640
Bleaching powder	564	6,762
Bronze, powder	....	9,010
Burgundy pitch	100	170
Butter, cocoa	88	3,579
Chalk	....	6
Chemical salts	233	11,051
Chicory	380	695
Citrate lime	25	1,936
Coca leaves	110	1,346
Cobalt	4	1,893
Cutch	500	3,437
Dextrine	271	1,810
Divi divi	11	17
Dyewood, extract of	79	1,493
Fish sounds	89	2,142
Flowers, chamomile	5	110
Flowers, all other	78	798
Fuller's earth	300	187
Gambier	2,937	26,148
Gelatine	331	6,175
Glycerine	136	11,284
Gum arabic	1	7
Gum, aloes	327	853
Gum, chicle	48	1,403
Gum, copal	689	6,599
Gum, camphor	60	1,957
Gum, damar	50	700
Gum, kowrie	31	2,628
Gum, shellac	1,794	32,388
Gum, senegal	225	5,963
Gum, substitute	10	109
Gum, scammony	1	304
Gum, tragacanth	31	3,032
Gum, all other	60	581
Glue	227	7,574
Indigo, auxiliary	15	787
Iodine	64	17,545
Juniper berries	132	270
Leeches	14	154
Manna	1	26
Manganese	23	527
Manure salt	....	4,212
Nutgall, extract of	15	1,134
Nux Vomica	522	1,206
Orchilla liquors	10	275
Oxide, zinc	13	183
Oil, almonds	9	173
Oil, aniline	10	1,381
Oil, bergamot	5	187
Oil, citronella	42	4,822
Oil, cod	650	9,049
Oil, cocoanut	405	28,722
Oil, juniper	1	62
Oil, linseed	1	6
Oil, olive	6,914	38,924
Oil, palm	97	5,068
Oil, rapeseed	32	637
Oil, rosemary	24	1,430
Oil, sod	29	344
Oil, sandalwood	1	48
Oil, thyme	25	2,000
Oil, other essential	45	3,660
Oil, all other	19	700
Opium	20	8,102
Orange peel	70	508
Paints (unspecified)	....	5,438
Paints, Berlin blue	21	710
Paints, colcothar	63	610
Paints, drop black	16	825
Paints, iron oxide	52	415
Paints, ocher	493	2,546
Paints, orange mineral	15	441
Oil, Prussian blue	2	55
Paints, sienna	53	491
Paints, tuscan red	15	150
Paints, Venetian red	775	2,031
Paints, white lead	243	1,051
Pitch	175	230
Potash, chlorate	2,134	17,146
Potash, carbonate	80	2,688
Potash, prussiate	29	2,322
Potato starch	100	405
Plumbago	244	2,229
Quinine	74	7,205
Regular antimony	138	5,933
Root, jalap	1	76
Root, licorice	9	60
Root, orris	7	457
Root, sarsaparilla	10	118
Root, all other	20	390
Salacine	1	80
Saffron, extract of	2	1,979
Senna	30	569
Soda, ash	400	2,219
Soda, caustic	800	9,361
Soda, chlorate	50	485
Soda, nitrate	20,998	93,092
Soda, sal	840	1,270
Soda, silicate	7	71
Sponges	569	11,749
Stearine	102	482
Sulphur ore	....	6,378
Sumac	530	1,797
Sumac, extract of	54	1,133
Terra alba	633	1,329
Ultramarine	5	161
Vanilla beans	41	66,671
Varnish	3	27
Wool, grease	300	1,593
Other	....	44,286
Bristles	58	16,670
Rennets	10	3,944
Alcohol	1	4
Dutch metal	30	2,483
Lead, pigs	8,893	28,938
Metal, leaf	8	2,077
Cassia	100	626
Ginger	31	328
Mace	50	1,414
Nutmegs	70	1,768
Pepper	2,083	13,064
Pepper spices	105	200
Pimento	18	78
Corkwood	....	3,673
Dyewood	....	24
Fustic	....	996
Logwood, 1,000 lbs	150	1,158
Sandalwood	....	1,828
Candles	....	749
Clay	....	92
Carbon	....	1,586
Corks	....	1,612
Mush	....	4,650
Portland cement	24,312	31,502
Perfumery	85	7,306
Powder, polishing	....	46
Seed, annatto	33	289
Seed, canary	700	2,698
Seed, caraway	100	393
Seed, cardamom	1	64
Seed, hemp	200	716
Seed, poppy	395	1,335
Seed, other	....	396
Soap, castile	1,082	3,466
Soap, all other	141	5,472
Soap, stock	1	15
Stone, pumice	....	1,198
Stone, rotten	....	200
Tapioca	716	1,527
Tapioca flour	401	1,303
Wax	....	1,362

GOODS ON THE WAY TO THE UNITED STATES BY SAIL.

Calcutta.

TO NEW YORK.

Dunearn, 2,230 bgs saltpeter, 6,450 bls jute butts, 4,300 bls jute rejections
Dundonald, 2,523 bgs saltpeter, 1,482 bgs jute, 13,278 bgs jute butts
Cleomene, 2,456 bgs saltpeter, 1,398 bgs jute, 9,392 bgs jute butts

TO BOSTON.

Pisaqua, 4,736 bgs saltpeter, 5,000 bgs jute, 14,459 bgs jute butts

Singapore.

TO NEW YORK.

Lillian L Robbins, 15,000 bls gambier
Speme, 9,000 bls gambier
Garibaldi, 4,200 bls gambier
Cambusdoon, 7,300 bls gambier

TO BOSTON.

Daniel Barnes, 6,000 bls gambier

Bi-Carbonate Potash

Beechwood Creosote, U.S.P.

Eucalyptol, C.P., U.S.P.

MERCK & CO. Salicylic Acid

MERCK BUILDING (Cor. University & Clinton Places). Down-Town Office: WOODBRIDGE BUILDING, 100 William Street.

Ceylon.

TO NEW YORK.

Katinka, 100 tons Ceylon
Auguste, 150 tons Cochin

Hong Kong.

TO NEW YORK.

West Coast South America.

TO THE UNITED STATES.

Glenbervie, 9,000 bgs nitrate soda
Australia, 18,000 bgs nitrate soda
Coya (ss), 25,000 bgs nitrate soda
Coro-Coro (ss), 25,000 bgs nitrate soda
Dochra, 11,000 bgs nitrate soda
Cacique (ss), 25,000 bgs nitrate soda
Capac (ss), 25,000 bgs nitrate soda
Harvard, 11,000 bgs nitrate soda
Chas Racine, 17,000 bgs nitrate soda
Rose Morran (ss), 25,000 bgs nitrate soda
Gogoburn, 11,000 bgs nitrate soda
Lorton, 16,000 bgs nitrate soda
Ednyfed, 14,000 bgs nitrate soda
Peebleshire, 10,000 bgs nitrate soda

RECORD OF VESSELS.

Port and Name.	Sailed.
Auckland.	
Calcutta.	
Dunearn	May 16.
Dundonald	April 15.
Cleomene	May 1.
Pisaqua	April 28.
Singapore.	
Lillian L Robbins	March 23.
Speme	April 15.
Garibaldi	May 18.
Daniel Barnes	May 15.
Cambusdoon	June 20.
Ceylon.	
Katinka	April 14, via Aleppy May 15.
Auguste	Loading June 9.
W. C. S. America.	
Glenbervia	Due August.
Australia	Due August.
Coya (ss)	Due August.
Coro-Coro (ss)	Due September.
Dochra	Due October.
Cacique (ss)	Due October.
Peebleshire	Due August.
Ednyfed	Due August.
Lorton	Due August.
Gogoburn	Due August.
Rose Morran	Due September.
Chas. Racine	Due October.
Harvard	Due October.

The Situation in Indigo.

Unsatisfactory in the highest degree as must have been the result of this week's quarterly indigo sales to holders, yet hardly any other feeling than that displayed during the transactions could have possibly been anticipated in London, or, for the matter of that, in Europe. All indications pointed to a poor competition and generally lower prices. This view has apparently not been shared by Indian consignors, for it was evident, from the tenacity with which they stuck to their high limits, that they fully expected a keen competition and higher values. Their disappointment, we fear, will be great, but it appears to us that Indian consignors generally have been too much impressed by the large number of disasters with which India has been punished recently, and that, in the face of those misfortunes, they have lost sight of the real statistical position of the article. Otherwise they could have hardly failed to recognize the real state of affairs, which, by the way, their London agents endeavored to demonstrate to them before the sales, in order to induce them to reduce their exorbitant limits. Only in a few solitary instances natives have been prevailed upon to accept bids submitted to them privately, and this fact caused, for a very short time, some little activity just previous to the sales, but as soon as the few orders had been executed, business relapsed once more into its former dormant state. In this condition, we are afraid, we shall remain till next month, for only then reliable reports as to the prospects of the new crop will reach us, and it will depend upon the tenor of these communications whether our market will be capable of a rise or will decline further under the pressure of another bumper crop. So far the reports have been far from satisfactory; everything seems to have combined to ruin the indigo production—famine, plague, inclement weather—and now we are actually told that clouds of locusts have descended upon the indigo producing districts, doing great damage and havoc among the young foliage. A small army of soldiers and natives, we are informed, have been sent out to kill the animals and assist the much-tried planter in every way possible. Even this alarming news has failed to influence buyers, although it was well calculated to frighten the bravest of them into purchasing; but the very fact that this report reached us just in time for the sales has, we fear, deprived it of its importance. Buyers have hear similar tales before; India has cried "Wolf!" too often, and our consumers remained deaf to all the disastrous news from India. They have become hardened, for their experience of last year's crop is still too vivid in their recollection. Then a crop of 120,000 maunds at the very outside was expected, and after all we received a yield of no less than 160,000 maunds; 480,000 maunds in three years is too much for consumption, and the result is that every dealer and consumer is up to his ears in indigo. This does not refer to London or England alone, but to the Continent as well. The poor sale of 1,850 chests out of 9,700 chests brought forward more than proves this fact. So far, a crop of about 120,000 maunds, according to Indian estimates, is expected, and if this should turn out correct, next month we may, considering the large stocks held everywhere and the yearly estimated consumption of 135,000 maunds, see prices about unaltered; anything below 120,000 maunds would probably enforce higher values, whereas any excess of that amount would result in a further decline in prices. It is to August, therefore, all those interested in indigo look with great anxiety.—London Commercial Record.

Clove Trade of Zanzibar.

As in previous years, the statistics shown against cloves represent the quantity actually brought in to Zanzibar from the shambas (plantations) between Jan. 1 and Dec. 31, the clove season extending only from the month of September to March, which is the period during which they are picked, dried and brought to the market. The total quantities (in weight) during the past seven years are as follows:

Year.	Quantity—Zanzibar Cloves. Frasilas.*	Quantity—Pemba Cloves. Frasilas.*	Total. Frasilas.*
1890	124,929	384,933	509,862
1891	69,388	324,252	393,640
1892	121,398	236,211	357,609
1893	108,090	259,367	367,457
1894	138,691	372,999	511,690
1895	146,397	391,460	537,857
1896	119,791	237,090	356,881

*A frasila is equal to 35 lbs.

The duty in kind is at the rate of 25 per cent., so that where a decrease is shown, as in the year dealt with in this report, the duty also diminishes proportionately.

The present season's crop will, it is feared, prove to be a much smaller one than for several years past; the receipts for the last four months of the year 1896 show indeed that the crop has fallen off, as compared with the early months of the clove season. The fall in the value of this article is caused in all probability by overstocked markets. During the year 1895 the average price was as follows: Pemba cloves, $2.22; Zanzibar cloves, $2.44 per frasila; and this year, $1.76 for Pemba cloves and $1.94 for Zanzibar cloves per frasila, showing a greater decrease than for many years past, while during October and November there was a slight improvement in prices, owing to the requirements of a few competing merchants, who were obliged to fill up their consignments. Another cause for the fall in the price of cloves, besides the one already referred to (viz., an overstocked market), has been the plague prevailing in Bombay, and it is reasonable to expect that when the epidemic has ceased, prices will gradually improve again. In comparing the last six or seven years it will be seen that there is an increase and a decrease shown alternately in the price of Zanzibar cloves, while during the latter two or three years (ending with 1895) there has been a steady increase. The maturing and bearing of the young trees may not improbably be the cause of this. It appears that in both the islands of Zanzibar and Pemba, the shambas (especially those owned by Arabs) have been allowed to depreciate for want of proper attention, owing to great scarcity of labor. There can be little doubt that neglect in this respect not only causes a direct loss to the clove crop through inadequate picking, but also is likely to become detrimental to the trees themselves. If, on the other hand, it were found possible (as no doubt in due time will be the case) to collect an adequate amount of laborers to work the plantations properly by removing the old non-bearing trees, which could be replaced by new ones, and by giving a fair amount of care and attention to the plantations, the production of cloves would be a more profitable one. Now that free laborers are no longer debarred from coming here to take the place of slaves, whose numbers have gradually diminished through death and other causes, it is to be hoped that the cultivation of this and other produce of the islands will be improved by the importation of coolie labor from India or elsewhere. To illustrate what can be done by imported labor, any one who has visited our Australian colonies will have been struck by the amount of work, both in cultivation and in other branches, effected by Chinamen. In spite of the tax which they have to pay they swarm over the land in great numbers, obtaining rich results from their untiring industry in agriculture. I am not aware how far the health of this class of laborer would be injuriously affected by this climate, nor whether they would be willing for fair compensation to emigrate to Africa, but there can be little doubt that their importation, if found practicable, would solve the labor difficulty, by no means a small one, in these islands.

The lateness of the first crop of cloves, which was, on an average, two months behind that of former years, may not improbably have contributed to the decrease shown in the prices, and I should also mention that owing to a fall in the market the owners of estates or "shambas" (who require pecuniary encouragement to make them employ labor) have left most of the crops to wither on the trees. When, however, the market improves, there is reason to hope that native labor will be again employed. The disturbance occasioned by the bombardment in August last did not cause any serious check in the clove trade, but merely a suspension in business for some two or three weeks.—British Consular Report.

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NITRATE OF IRON — SILICATE OF SODA
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CHEMICAL MARKET.

Note—*Our prices are for large lots except when otherwise specified, and buyers of small quantities must expect to pay an advance on these figures. Complete prices current will be found on pages 36 nd 37*

Saturday Evening, July 31, 1897.

Since the passage of the tariff bill the market for chemicals is firmer in all portions. Some of those affected have been advanced, while others, while not quotably higher, are offered only in a limited way. Bleaching powder has been advanced; also caustic and sal soda. Arsenic is higher, and the same may be said of brimstone. Nitrate of soda is weak and depressed, owing to sharp competition. Argols are higher; also coperas, and, owing to the strikes in the West, has been advanced. The other light chemicals and acids show few changes, as detailed below. In their letter, under date of July 21, Messrs. J. P. Brunner & Co. of Liverpool say:

"There is no special feature to report as regards chemicals, and trade all round is rather slow. Soda ash inactive, but quotations unchanged. Quotations vary considerably according to export market, and range for tierces is about as follows: Leblanc ash, 48 per cent., £4 5s. to £4 10s. per ton; 58 per cent., £4. 10s. to £4 15s. per ton, net cash. Ammonia ash, 48 per cent., £3 7s. 6d. to £4 per ton; 58 per cent., £3 12s. 6d. to £4 5s. per ton, net cash. Bags, 5s. per ton under price of tierces. Special quotations for American business. Soda crystals are moving off at from £2 7s. 6d. to £2 17s. 6d. per ton, less 5 per cent. for barrels, and 7s. less for bags, according to destination. Special terms for American orders. Caustic soda in fair demand and firm, the spot range being about as follows: 60 per cent., £6 3s. 9d. to £6 5s. per ton; 70 per cent., £7 3s. 9d. to £7 5s. per ton, net cash. 74 per cent., £8 2s. 6d. to £8 5s. per ton; 76 per cent., £8 15s. to £9 per ton, net cash. Bleaching powder neglected and nominally quoted at about £6 12s. 6d. to £6 17s. 6d. per ton, net cash, for hardwood packages, as to destination. Chlorate of potash in limited request, at nominally 4d. per lb. Bicarb soda is well maintained at £6 15s. per ton, less 2½ per cent. for the finest quality in one cwt. kegs, with usual allowances for larger packages. Sulphate of ammonia is rather idle, but at the same time prices keep steady at £7 16s. 3d. to £8 per ton, less 2½ per cent. for good gray 24@25 per cent., in double bags f. o. b. here, as to quality. Nitrate of soda dull at about £7 17s. 6d. to £8 per ton, less 2½ per cent. for double bags f. o. b. here, as to quantity and quality."

Heavy Chemicals.

ALKALI.—The market is firmer in all positions, with prices for 58 per cent. foreign now quoted at 70@75c., and 48 per cent. at 75@80c., as to style of packing. Domestic, while firmer, is not generally quoted higher, though one maker has raised their price. The others are not offering except in a limited way at 60c. for bags f. o. b. works. Several large orders have been turned down on the basis of 55c. f. o. b. works. There is a better jobbing demand from the mills, as many are anticipating their fall wants before an advance occurs, which is not at all unlikely within the next few weeks. Sales are reported of 125 tons in lots at 75@80c, as to make and style of packing.

BICARB. SODA.—There is an improved demand for domestic, as many large consumers have been free buyers, in anticipation of an advance by makers, who, for the present, are quoting 3.50c. for extra and 1.50c. f. o. b. for ordinary grades, less the usual discount. Foreign makes are all higher and may now be quoted at 2.75@3.25c., as to make, quantity and port of delivery.

CRYSTAL CARBONATE. — During the past week there has been an increased demand for this article since the new duty went into effect.

CAUSTIC SODA.—With the passage of the tariff bill prices have been raised for both domestic and foreign high test by the agents, who now quote for contract lots, 2@2.25c., as to test, make and quantity. There are some outside lots on the spot, which are procurable a shade less, but the quantity is limited. Powdered 98 per cent. is also firm and may now be quoted at 3.75@4c., as to test and make.

SALTCAKE.—There has been an improved demand the past few days for domestic, but makers are offering only in a limited way at 45c. delivered in the gas belt. Foreign, with the present duty, does not "cut any ice" in the market.

SAL SODA.—Foreign has been advanced and may now be quoted at 67½@70c., as to make and quantity. Domestic is generally quoted at 70c. for prompt delivery, though some makers continue to name 65c., but have none for prompt delivery. Concentrated is selling freely at 1.40@1.60c. f. o. b., less the usual discount, as to style of packing.

MONOHYDRATE CRYSTALS.—As intimated in our last, prices have been advanced to meet the increased demand for this article. We quote 1.45@1.50c. and "snowflake" 1.20@1.25c., as to quantity and delivery point.

BLEACHING POWDER.—The market is firmer in all positions, and prices have been advanced to cover the increased duty. Prime fresh high test is scarce, and held firm at 1.85@2c., with outside makes quoted at 1.75@1.80c., as to test and make.

Acids.

ACETIC.—Considerable business has been done with the mills for forward delivery with protection. Sales are re-

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CUTCH,
LEMON OIL.

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COCOANUT OIL, Cochin,
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This Alkali contains 58 Per cent. of Alkali or nearly 99 per cent. of Carbonate of Soda. It is the most economical form of Soda for Manufacturers of Soap, Glass, Paper, Wood Pulp and Colors, and for Printers and Bleachers.

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ported of 35 tons at 1.25@1.35c. as to test, make and delivery point.

MURIATIC.—A better demand is reported the past few days than has existed for several months past. Prices remain steady at 80@95c., as to make, test and quantity.

OXALIC.—More demand is reported from the mills, and prices may be quoted firm at 7¼@7½c., with sales of 75 casks reported within the range.

TARTARIC.—Only a small retail demand is reported at prices ranging from 30@30½c. for crystals, and 30½@31c. for powdered, usual terms.

SULPHURIC.—Makers all report business for the month much better than they expected. At the close there was more inquiry from the East, all of which indicates a better outlook for the acid trade. The brimstone acid makers all feel better since the crude article was put back on the free list. For bulk 66 degree they are quoting 60@70c. and for carboys, the price ranges from 75@95c., as to make and size of the order. Bulk chamber 50 degrees is meeting with a better demand, with sales reported at $5.50@6 per ton, f. o. b. factory.

Miscellaneous Chemicals.

ACETATE OF LIME.—No change in the situation, the demand being limited. Prices are only fairly steady at .80@.85c. for brown, and 1.25@1.30c. for gray, as to quantity and delivery point.

ALUM.—More demand with prices a shade steadier in the East since the passage of the tariff bill, which will prevent further cutting on the part of foreign makes. In this section there is a good demand with sales reported of 150 bbls. lump at 1.60@1.70c., and 75 bbls. ground at 1.70@1.80c., as to make and size of the order.

ARSENIC.—The market remains very firm, and prices may now be quoted at 5⅜@5½c. for German and 5½@6c. for English, the latter for garlands. The demand, however, is only limited. Red continues scarce and held steady at 7½@8c., as to quality.

ARGOLS.—As yet no change has been made in quotations by agents, who quote 15½@16c. for plates and 2¾@3c. for reds, as to test. The increased duty is 1½c. on plates and 1c. on reds.

BRIMSTONE.—The market is steady at $20.50 for spot and nearby arrivals. Shipments are also firmer, and may now be quoted at $20.50 per ton for August - September. The demand, however, is light, as buyers generally stocked up in anticipation of a duty being placed by the new tariff, which was not done through activity of some of the acid men.

BLUE VITRIOL.—Better demand for car lots, which are now quoted at 3½c. For jobbing parcels there is a fair inquiry at 3⅝@3¾c., as to the size of the order.

COPPERAS.—Owing to the coal strikes in the West, prices for car lots have been advanced, and may now be quoted at 50c. Previous to the advance considerable business was done at 42½c.

CHLORATE OF SODA.—There is an improved demand from the mills, and prices are steady at 11¼@11½c., as to make and quantity.

CHLORATE OF POTASH.—The market is in a peculiar position. While it is possible to buy single kegs at 9¼c., for a larger quantity 9½@9¾c. is lowest named. The demand, however, is not urgent. Powdered continues scarce and held firm at 9¾@10c.

CAUSTIC POTASH.—Only a small retail demand is reported for prompt delivery at 4½@6c., as to test, brand and quantity.

CARBONATE OF POTASH.—Since the new tariff bill went into effect, which makes this article free, prices have been lowered, and may now be quoted at 3½@5¼c., as to test and make. For 99° they are quoting 6@6¼c., as to quantity and holder.

CREAM OF TARTAR.—The market is weak and dull, with outside holders supplying the wants of the trade at 23½c. for either crystals or powdered.

GLAUBER'S SALT.—No change in the situation, except in this section there is a better demand and higher prices are obtained than down East. We quote car lots at 60c. and upward, as to make and quantity.

NITRATE OF SODA.—The market, owing to sharp competition, is somewhat unsettled, and may be quoted at 1.67½@1.70c., at which only a retail trade is reported. Shipments due this year are quoted at 1.65c., and next year at 1.67½c.

SUGAR OF LEAD.—Previous to the advance in prices by the leading makers considerable business was done with the mills with protection. We are reported sales of 30 tons of broken white at 5¼c. We quote prime white crystals at 7¼@7½c., and broken at 5½@6c. Brown is scarce and held firm at 5c.

SAL AMMONIAC.—In anticipation of an advance in prices by agents to cover the increased duty considerable business has been done for spot and nearby parcels. We quote for the present at 5¾@6c. for white grain, 4¾c. for rough and 7¾c. for lump.

SALTPETER.—Trade is slow and prices for spot are weak at 2.95@3c. Shipments are also lower and may be quoted at 2.90c. Refined is dull as usual at this season of the year at 4½@5c., as to quality.

Ammoniates, Potashes, Etc.

During the past week there has been a decided improvement in the demand for the leading ammoniates, especially for Western high grade blood, which is now held at $1.57½ f. o. b. Chicago, though early in the week considerable changed hands at $1.55. New York soft is selling freely at $1.67½. Sulphate of ammonia is steady for arrival at $2.07½@2.10 for gas, and $2.05 for domestic bone. Tankage is steady at $14 per ton f. o. b. Chicago for 9 and 20, though sales were made early in the week at $13.50. Bone meal is dull and may be quoted nominal at $18@19 for domestic and $19@21 per ton for Calcutta, as to grist and date of arrival. Fish scrap has further been dealt in on the basis of $17.50 per ton for dry and $1.60 per unit for acid, f. o. b. factory. Sulphate of potash and double manure salt both quiet, but steady, at regular syndicate prices. Messrs. T. H. White & Co., in their circular, say:

"The market for ammoniates has been strong and active the past week, with advancing tendency. The inquiry for fish, both dry and acid, has been general, and heavy sales are reported at $1.55 per unit and $9.50 flat, f. o. b. factory, for acid, and at $17 to $17.50, as to quality, for dry. The Southern demand for Western tankage and blood continues, and all reasonable offerings of nearby, as well as future, deliveries have been taken promptly. We quote: Ground blood, $1.55 to $1.60 per unit, f. o. b. Chicago; ground blood $1.50 to $1.55 per unit, f. o. b. Kansas City; crushed blood, $1.42½ per unit, f. o. b. Kansas City; high grade crushed tankage, 9 and 20, $11 to $12, f. o. b. Kansas City; high grade crushed tankage, 10 and 10, $14, f. o. b. Chicago; high grade crushed tankage, 9½ and 18, $14, f. o. b. Chicago; high grade crushed tankage, 9½ and 5, $13.50, f. o. b. Chicago; high grade crushed tankage, 8½ and 20, $12, f. o. b. Chicago; crushed tankage, 9 and 20, $1.55 and 10, Baltimore and New York; foreign gas liquor sulphate of ammonia, $2.12½, c. i. f. Baltimore and New York."

The Commercial Preparation of Nitronaphthalenes.

BY WILLIAM H. KRUG AND J. E. BLOMEN.

The manufacture of nitronaphthalenes has of recent years acquired conerable importance in the arts, and particularly in the explosive industry. In this industry it has been utilized in various ways and for different purposes. The late Nobel was the first to point out that the addition of nitronaphthalene to a nitroglycerol explosive, such as nitrogelatin, rendered this practically non-sensitive to concussion, and this property has been and is still widely applied to render the handling of nitroglycerol explosives more safe.

In the manufacture of nitro substitution powders, nitronaphthalene soon replaced the more expensive nitrobenzol as a basis, and a large number of patents were taken out for its use with oxidizing agents alone or with an admixture of sensitizing agents, such as nitroglycerol, picric acid, etc. A third use was found for nitronaphthalene when it was discovered that it seemingly rendered dynamite "non-freezable." Even a small admixture of nitronaphthalene causes dynamite to remain soft to the touch at low temperatures, and it has therefore been extensively used for the manufacture of non-freezing dynamite. It has been proved that this advantage is only chimerical; the addition of nitronaphthalene in no wise changes the properties which are characteristic of nitroglycerol at low temperatures, but in fact adds a new element of danger, as it makes it impossible for the miner to determine whether the dynamite should be thawed before use.

Still another use of nitronaphthalene was taken advantage of in its property of rendering dynamite "fumeless," but this has not yet been definitely proved. In the manufacture of plastic dynamite it has always been difficult to obtain a nitrocellulose which gelatinizes perfectly in the nitroglycerol. An addition of nitronaphthalene will considerably increase the solvent action of nitroglycerol on nitrocellulose, i. e., even higher nitration degrees than trinitrocellulose may be dissolved when nitronaphthalene is added to the nitroglycerol. The vast importance of this property will be realized by any manufacturer who has a large quantity of the expensive nitrocellulose rejected on account of its insolubility in nitroglycerol.

Almost every manufacturer of explosives has been confronted with the problem of preparing nitronaphthalene in a practical and economical way, but has found that very little of practical value has been published on this important subject.

In speaking of nitronaphthalene, a mixture of the nitronaphthalenes is always meant. When the nitronaphthalene is used in conjunction with nitroglycerol its melting point is of minor importance, but it is desirable to have as high a degree of nitration as possible, since this will retard the momentum of the explosion to a less degree. When used with other sensitizing agents, such as picric acid, it is obvious that the melting point must be below the decomposition point of this agent. When it is desired to use a higher nitronaphthalene in this connection it may be accomplished by adding a small amount of mononitronaphthalene, as the latter acts as a solvent of the higher nitro derivatives, and they together will dissolve picric acid, nitrocellulose and the like.

The investigations which form the basis of this paper were undertaken to

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determine under what conditions the largest yield of suitable nitronaphthalenes could be obtained. The nitro derivatives of naphthalene are generally obtained either by the action of nitric acid alone or mixtures of nitric and sulphuric acids on naphthalene, or for the highest nitro derivatives by renitration of the lower nitronaphthalenes. It has been suggested at different times to prepare the higher derivatives by the nitration of naphthalene-sulphonic acid similarly to the preparation of nitrophenols from phenolsulphonic acid. To ascertain the practicability of this proposition the following experiments were made:

(a) Naphthalene-sulphonic acid was prepared by heating naphthalene to 100 deg. C. for about eight hours with one, two and three times the amount of sulphuric acid required by theory. A fourth preparation was made, using a large excess of sulphuric acid. This last preparation was the only one which appeared free from naphthalene, the substitution being practically complete. It had no odor, was free from naphthalene crystals and gave a clear solution with water.

A quantity of each of these preparations corresponding to ten grams naphtalin, was weighed into flasks and treated in one series with forty grams 36 deg. B. nitric acid, and in another series with thirty grams of the same acid. This strength acid was chosen because it most nearly represents the waste acid recovered in the regaining works of nitroglycerol plants. The stronger acid, 1.42 sp. gr., is so much more expensive that its use is practically out of the question in the commercial preparation of nitronaphthalenes. The action is furthermore so violent when it is used that there is considerable loss of naphthalene through sublimation, and the gain in yield is not proportionally higher. Dilution below 36 deg. B. offers no advantages, as we will show, and is therefore not necessary.

The nitrations were made on a water bath and were considered complete some time after the red fumes ceased to come off. The resulting mass was melted under water and washed in this state until acid-free. It was then carefully dried on watch-glasses and weighed. When the nitronaphthalenes are used with nitroglycerol or nitrocellulose, it is very important that it should be neutral, and it may even be slightly alkaline. We have found that this cannot be done with a weak solution of alkali, as it decomposes the product, giving a deep yellow solution. It may, however, be done with a weak solution of sodium carbonate.

The results were:

Series I.—Forty Grams 36° B. Nitric Acid.

No.	Weight of product.	Color.	Odor.	Melting point.
1	13.3661	yellow	strong	49.0°
1A	12.8342	yellow	strong	50.0°
Mean	13.1002			
2	7.6504	yellow	strong	50.0°
2A	7.0289	yellow	strong	52.0°
Mean	7.3397			
3	1.0022	greyish-yellow	slight	152.0°
3A	0.8288	yellow	slight	....
Mean	0.9155			
4	0.0514	brown-yellow	none	....
5	0.4830	pale yellow	none	150.0°
5A	1.3017	pale yellow	none	....
Mean	0.8923			

Series II.—Thirty Grams 36° B. Acid.

No.	Weight of product.	Color.	Odor.	Melting point.
1	10.6374	orange	strong	54.0°
2	9.6721	yellow	strong	57.0°
2A	13.6125	orange-yellow	strong	52.0°
Mean	11.6423			
3	0.7623	greyish-yellow	slight	163.0°
3A	0.4714	yellow	slight	....
Mean	0.6169			
4	0.0227	brown	none	....
5	0.8708	almost white	none	165.0°
5A	0.3020	pale yellow	none	....
Mean	0.5864			

No. 1. Pure naphthalene.

No. 2. Naphthalene treated with the theoretical amount of sulphuric acid.

No. 3. Naphthalene treated with twice the theoretical amount of sulphuric acid.

No. 4. Naphthalene treated with three times the theoretical amount of sulphuric acid.

No. 5. Naphthalene treated with excesss sulphuric acid.

It will be seen that the two series correspond quote closely in every respect and that the yield decreases proportionately with the extent of sulphonation. It is, therefore, impossible under these conditions to prepare nitronaphthalenes from a naphthalene-sulphonic acid, although a higher nitration degree is obtained than with pure naphthalene. The products obtained with the latter seem to be practically mononitronaphthalene, and previous sulphonation in the other tests were so incomplete that the advantage to be gained by it is not apparent.

We next turned our attention to the preparation of the nitronaphthalenes from naphthalene direct, with a view of determining the mixture of nitric and sulphuric acids which would give the best results. Ten grains of naphthalene were used in each experiment. The sulphuric acid was mixed with the nitric acid before adding it to the naphthalene and the amount used corresponded to that present in the tests of the first series.

Set I.—30.23 Grams Nitric Acid Used Corresponding to Forty Grams 36° B. Acid.

No.	Weight H2SO4.	Weight of product.	Color.	Odor.	Melting point.
1	8.0	14.3470	orange	strong	86.0°
1A	8.0	14.2646	orange	strong	99.0°
	Mean	14.3058			
2	16.0	14.5964	orange	strong	116.0°
2A	16.0	14.6278	orange	strong	124.0°
	Mean	14.6121			
3	24.0	15.2593	yellow	none	136.0°
3A	24.0	14.8473	yellow	none	139.0°
	Mean	15.0533			
4	52.4	16.9195	light yellow	none	112.5°
4A	52.4	17.2489	light yellow	none	109.0°
	Mean	17.0847			

Set 2.—22.67 Grams Nitric Acid Used Corresponding to Thirty Grams 36° B. Acid.

No.	Weight H2SO4.	Weight of product.	Color.	Odor.	Melting point.
1	8.0	14.2030	orange	strong	72.0°
1A	8.0	14.3260	orange	strong	80.0°
	Mean	14.2645			
2	16.0	13.7764	orange-brown	strong	100.0°
2A	16.0	13.4370	deep orange	strong	108.0°
	Mean	13.6067			
3	24.0	15.0656	yellow	slight	129.5°
3A	24.0	15.7075	yellow	none	136.0°
	Mean	15.3866			
4	52.4	17.7699	light yellow	none	108.0°
4A	52.4	16.9200	light yellow	none	110.0°
	Mean	17.3449			

Set 3.—27.87 Grams of Nitric Acid Used Corresponding to Forty Grams 34° B. Acid.

No.	Weight H2SO4.	Weight of product.	Color.	Odor.	Melting point.
1	8.0	13.4895	orange	strong	84.0°
1A	8.0	14.2570	orange	strong	80.0°
	Mean	13.8733			
2	16.0	14.7964	deep orange	slight	97.0°
2A	16.0	15.0230	deep orange	slight	94.0°
	Mean	14.9097			
3	24.0	16.2178	orange-yellow	none	133.0°
4	52.4	16.3830	brown-yellow	none	126.0°
4A	52.4	16.7150	light brown	none	126.0°
	Mean	16.5490			

Set 4.—20.90 Grams of Nitric Acid Used Corresponding to Thirty Grams 34° B. Acid.

No.	Weight H2SO4.	Weight of product.	Color.	Odor.	Melting point.
1	8.0	13.6220	orange	strong	99.0°
1A	8.0	13.6460	orange	strong	85.0°
	Mean	13.6340			
2	16.0	13.7861	yellow	none	122.0°
2A	16.0	14.2410	yellow	none	....
	Mean	14.0136			
3	24.0	14.4400	chocolate-brown	none	106.0°
3A	24.0	14.9230	chocolate-brown	none	108.0°
	Mean	14.6815			
4	52.4	charred	....	....	....
4A	52.5	charred	....	....	....

The highest yield was therefore obtained in every set except No. 4, when an excess of sulphuric acid was used. In No. 4 so little nitric acid was present that the product was decomposed by the sulphuric acid. The degree of nitration, as characterized by the melt-

(Continued on Page 48.)

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Saturday Evening, July 31, 1897.

As yet changes made by the new law in import duties have had little effect upon market values. While business has not improved, there is more inquiry, and the outlook for fall trade is considered to be very encouraging.

ALBUMEN.—There is little demand for either blood or egg. The former is unsettled, owing to competition, but prices are not quotably lower, the range being 19@23c., as to holder, quality and size of the order. Nominal quotations for egg are 53@55c., according to quality and quantity.

ANILINE OIL.—There has been no further change in prices, and no improvement in business. Prices are somewhat nominal at 14½@15½c., according to seller and quantity. The wants of consumption at present are small, and buyers are holding off.

ANILINE SALTS.—A steady feeling prevails, but the demand continues light. Holders want 16@17c. for stock on the spot and nearby, but seem to be making few sales. Contracts for shipment during the balance of the year may be made at 14@15½c., but even these prices do not seem to suit buyers, and the market for both spot and future goods closes dull.

BICHROMATE OF POTASH.—The demand for both spot and future goods continues light, and prices are unchanged. The feeling is steady, however, and we have to repeat our quotations of 10@10¼c., as to quantity.

CUTCH.—Good box goods are said to be scarce, and seem to be wanted, though only in a jobbing way. Some small sales are reported at 6@7c., as to quality, and these are now said to be inside quotations. Bale cutch is dull, and prices are unsettled, owing, it is said, to free offerings of inferior goods at low prices.

DEXTRINE.—The market is firmer but not quotably higher. On imported stock 4⅝c. seems to be an inside price, some holders demanding 4¾c. Domestic potato is quoted at 4½@4⅝c., and corn at 2@2¼c. The market closes firm with an upward tendency, though the demand is rather light.

DIVI DIVI.—Spot stocks are small and the market is very firm, notwithstanding a light demand. Small lots have been sold on the spot at $40, and this now seems to be an inside quotation. So far as known, there is nothing on the way.

GAMBIER. — The market remains dull and prices are nominal. Stock ex ship can be bought at 2.70c., but does not seem to be wanted. The nominal quotation for store goods is 2¾c., but some holders might be disposed to shade this on a firm offer for a large lot. Shipments by sail are offered at $2.65, but no business is reported. Stock to arrive is quoted at $2.67½@2.70, as to position, but these prices, in the absence of demand, are merely nominal.

HYPOSULPHITE OF SODA.—The higher duty has caused an advance of ¼c. per pound in spot market values. Trade, however, shows little improvement, the market closing quiet. We now quote $1.50@1.90, as to quantity and date of delivery.

INDIGO.—The market remains very quiet, and there were no features of special interest presented to-day. The close was steady and unchanged on both East India and Central American kinds.

NUTGALLS.—The market is firmer, but there is little business doing. Holders of Aleppos quote 12½c. as inside, but it is possible that this might be shaded in a large way. Chinese are quiet, but held steadily at 15@15½c., as to size of order. Large buyers, however, might do better.

PRUSSIATE OF POTASH.—There is still an unsettled feeling in the market, resulting from sharp competition from domestic producers, but prices are without change, 14½c. still seeming to be an inside quotation. Buyers show little interest at present, and the market closes quiet. There is little business in red, and the market is nominal and unchanged.

SAGO FLOUR.—Though trade is rather light the market is firm, and holders do not seem to be anxious to dispose of large lots. The quotations, as to quantity, are 1.70@1.80c. on the spot.

SUMAC.—Sicily remains dull, but there is no pressure to sell, and prices remain steady at $37.50@40. So far as can be learned there is nothing offered for forward shipment. Virginia remains dull and nominal at $32@36, as to quality and quantity.

STARCH.—A much stronger feeling obtains, owing to the prespect of a shortage in the corn and tomato crops. It was doubtful at the close if corn could be bought below 1⅝c., and 2½@2¾c. were the general quotations for potato. Wheat was firm and unchanged at 4⅝@5¼c. There was not much demand, however, but holders look for a good business during the coming month, as stocks in the hands of consumers are believed to be small.

The Bulgarian Otto of Rose Crop.

A Bulgarian correspondent of the Chemist and Druggist writes under date of July 7:

"The last two weeks have been devoted to the verification of the results of the new rose crop. The output is estimated variously at from 65,000 T. oz. to 80,000 T. oz. With one single exception, all the exporters agree that the present crop is not below 75,000 T. oz. The Government Commercial Journal, in its last issue, estimates it at 78,000 T. oz. So far as I have been able to check the present output from the best sources and detailed reports, the rose crop of 1897 is just about 73,000 T. oz. of pure otto of rose. At the commencement of the season the prospects were unusually brilliant. The rose bushes everywhere promised a most abundant harvest—much larger than last year's; but the heavy rains which fell daily during the whole season damaged the flowers considerably. Still, considering the unusual conditions under which the harvest was garnered the general results are more than satisfactory. Regarding the quality of the new otto, the present crop is undoubtedly one of the finest ever distilled. In the first place, the distillation everywhere was done slowly and thoroughly; secondly, the authorities exercised this year a very strict control over the importation and redistribution of geranium oil. Two important seizures of geranium secretly imported into the country for purposes of sophistication were made. These parcels were not intended for redistribution among the growers, but for the use of the notorious exporting houses who always sell their brands abroad greatly under the market price in Bulgaria, and throw the blame for their sophisticated otto upon the farmers. Like many previous seizures, these last also confirm the fact that if there are sophisticated ottos for sale abroad the only parties responsible for it are certain exporters and the consumers who patronize them. The strict control which the Government have exercised this year has made it very risky for the producer to tamper with his otto. As to the prices of the new oil, nothing definite can be said at present. The new prices will hardly be fixed before next month. All the indications favor a moderate figure, and some of the exporters are looking forward to even lower quotations. The villages producing the richest ottos, however, are sure to realize better prices. But all this will depend upon the demand of the consuming markets. It is rumored here that all these market are at present overstocked with old otto. If this proves true, the demand naturally will be rather limited. In Bulgaria the stock of old otto left over from last year is very heavy. Throughout the entire district the old otto held by the growers amounts to nearly 12,000 T. oz., while the exporters own among themselves old stock to the amount of 14,000 T. oz. This very large stock of old otto will naturally exercise a depressing influence on our market. Besides, the rose flowers this spring have realized very low prices."

Commercial Preparation of Nitronaphthalenes.

(Continued from page 47.)

ing-point, also increases with the amount of sulphuric acid present, but an excess has the opposite effect. The amount of nitric acid used in Set 1 has no advantage over the smaller amount used in Set 2, but it is not advisable to use still less acid, especially when higher nitration degrees are desired, since the product is apt to be attacked by the sulphuric acid.

To obtain derivatives of naphthalene for commercial purposes, it is therefore best to nitrate the naphthalene with a mixture of nitric and sulphuric acids, using about three times as much 36 deg. B. acid as naphthalene. The amount of sulphuric acid to be used will vary with the nitration degree desired and ranges from 4:1 (nitric: sulphuric) for low melting products, to 3:2 for the higher derivatives. Too large an excess must be avoided, as it chars the product, producing a tarry useless end-product.—Journal Am. Chem. Society.

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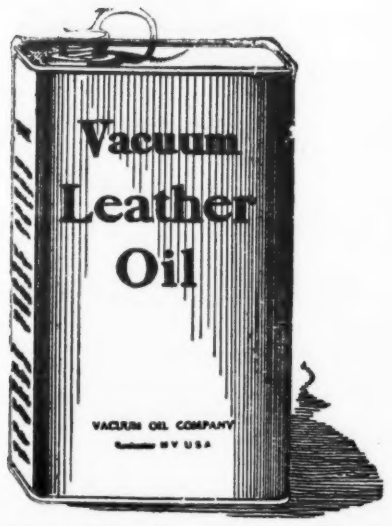

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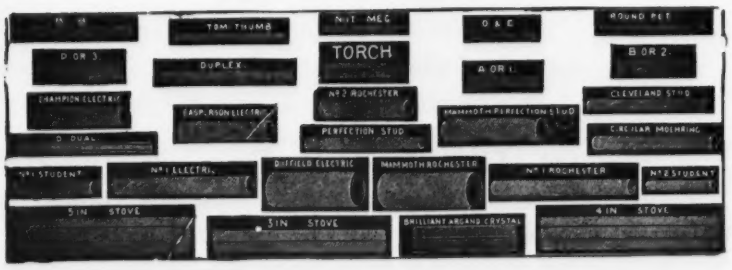

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